

ALL HANDS

THE BUREAU OF NAVAL PERSONNEL CAREER PUBLICATION



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JULY 1963





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Nav-Pers-O

NUMBER 558

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• **FRONT COVER: COLORFUL RETIREMENT** — Color guard bearing flags of our 50 states as well as CPO shipmates of Chief Signalman Lemond G. Perkins were on hand as the chief ended his Navy career on NTC San Diego after 22 years of service.

• **AT LEFT: TODAY'S NAVY?** The answer is yes! Dressed in uniforms of 1820, the U. S. Navy Band 'Sea Chanters' visit on board the sailing ship USS Constitution, oldest Navy ship in commission, berthed at the Boston Naval Shipyard, Charlestown, Mass. The choral group is from Washington, D. C.

• **CREDIT:** All photographs published in ALL HANDS are official Department of Defense photos unless otherwise designated.



THEY'RE LOADED — Crew members of USS *Ticonderoga* (CVA 14) take on supplies while underway at sea.

(AE), refrigerated store ships (AF) and, last but not least, general stores issue ships (AKS).

The Fleet oiler is considered the "lifeline" of the Fleet. These floating filling stations each carry between four and six million gallons of petroleum, including both aviation and ship fuels.

Ammunition ships are capable of delivering every type of ammunition required by ships and planes of the Pacific Fleet. They handle everything from bullets and bombs to guided missiles. AE's are air-conditioned throughout and equipped with the latest types of safety devices.

Getting Loaded

IF YOU HAVE NOT served on board a ship in the Pacific Fleet—and probably even if you have—you may never have heard of Task Force 73.

This Mobile Logistics Task Force supplies ships of PACFLEET with fuel, ammunition, food and general supplies. Task Force 73 also offers an important "extra" in the service department, transferring its wares to ships while underway at sea.

Since the days of WW II, the art

of replenishing ships while underway has been developed into an exact science by the U. S. Navy. With this capability, ships of the U. S. Pacific Fleet are no longer dependent upon overseas shore bases for their logistic support.

Replenishing ships at sea is primarily the task of logistic ships specially designed and equipped for this highly specialized role. There are Fleet oilers (AO), ammunition ships

Referred to as "reefers," stores ships are the seagoing supermarkets of the Fleet. These 450-foot long refrigerated ships stock a variety of more than 275 different foods, from meat and potatoes to canned goods and spices. Also included in their inventories are concentrated and dehydrated foods, such as frozen juices, instant potatoes, sliced canned bacon, and dry, synthetic vinegar.

General stores issue ships serve as hardware ships of the Navy. They stock 23,000 items for issue, ranging from electronic tubes to sheet metal; machinery parts to cleaning gear.

ON THE LINE — Carriermen of USS *Coral Sea* (CVA 43) stand ready to receive refueling hose and load of fuel from a Pacific Fleet oiler.



IN THE NEAR FUTURE these ships will be supplemented by a fifth member, the fast combat support ship (AOE). Now under construction at Bremerton, Wash., this ship will combine the ability to handle all types of ammunition with the ability to handle great quantities of fuel and some 500 tons of frozen food.

These logistics ships can easily be organized into complete replenishment groups to support a large task force of warships, or they can be assigned individually or in any combination to replenish ships on patrol or special missions.

The typical underway replenishment (UNREP) of an aircraft carrier task force commences several days before the actual rendezvous. A list of requirements from the ships in the task force is collected and dis-

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patched to the commander of the UNREP task force.

The replenishment ships then steam at a course and speed that will place them at the rendezvous point shortly before the prearranged hour. This allows the combatant ships to move in alongside the supply ships without lost time.

FOR NORMAL DAYTIME replenishment, crews of the logistics ships begin their day at 0200. Replenishment rigging is checked and moved into position; transfer nets are spotted; winches, booms and cranes are inspected; material that is to be transferred is arranged within the ship so that it can be issued to the right ship at the right time.

This is an especially trying period for the crews of the reefer ships. They must begin breaking out dry provisions 24 hours in advance. Frozen foods must be removed from the giant refrigerators from six to eight hours before transfer and pre-loaded into delivery nets. The netloads of material are then arranged on the hatch squares in preparation for hoisting to the main deck and subsequent transfer to the receiving ship.

Soon after the first light of day, with all arrangements complete, replenishment commences.

While the aircraft carrier is receiving fuel from one side of the Fleet oiler, cruisers and destroyers use the opposite side. Four destroyers



'HASH SLINGERS' — Refrigerated stores ship *USS Sirius* (AF 60) high-lines provisions to carrier during operations at sea in the Pacific.

can be topped off while the carrier is taking on fuel. The refueling operation, as with all underway replenishments, takes place while the ships are moving at 15 knots.

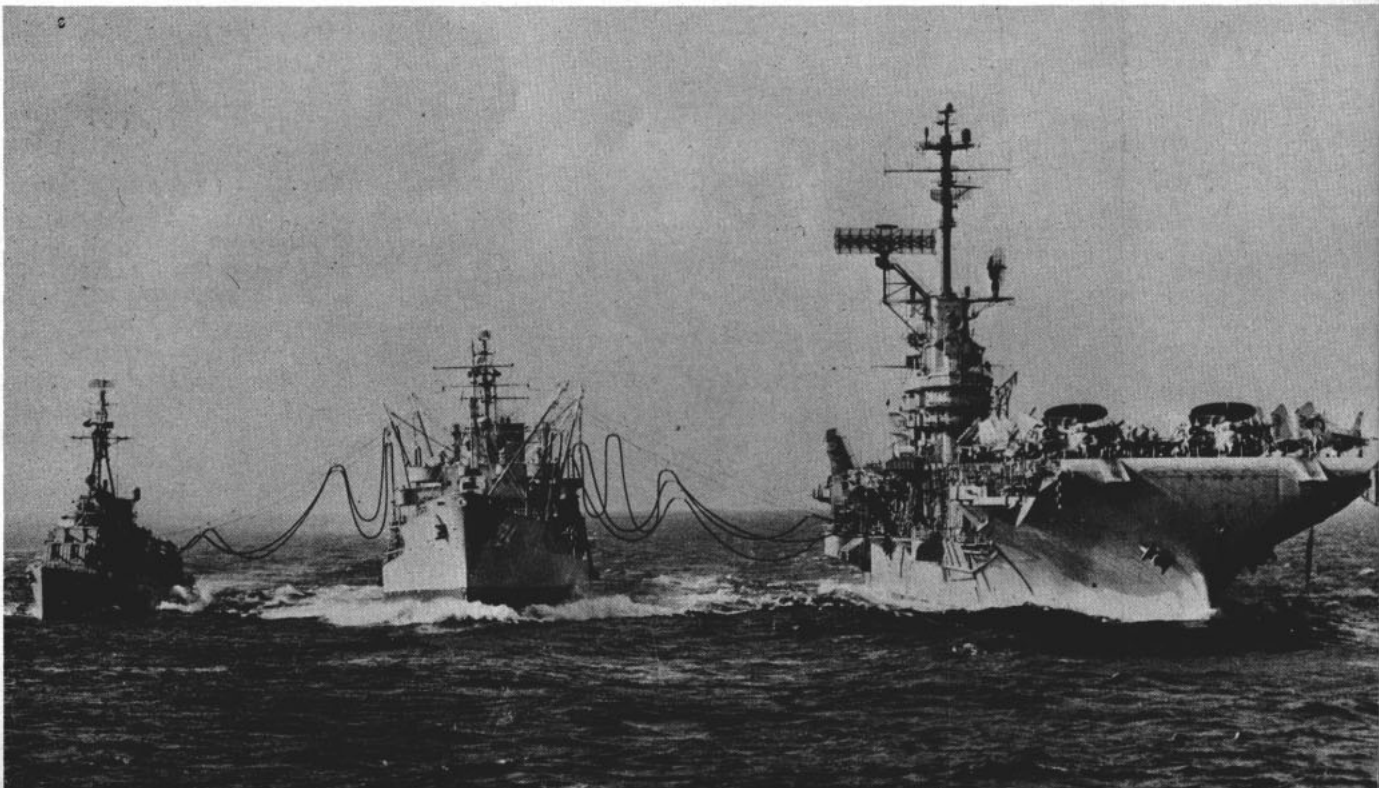
Elsewhere, other combatant ships are receiving great slings of ammunition, food and general supplies. As one ship completes its replenishment, another ship quickly moves in and takes its place.

At the end of the day, the task force of fully primed and ready war ships goes on to accomplish its mission. The UNREP ships return to

their forward operating base to replenish their own depleted stock and await the call that will send them out to resupply more of the Pacific Fleet's 400 ships in another part of the multi-million-square-mile area in which they operate.

Seapower throughout the trackless Pacific Ocean is vital to the security of the United States and her allies in the Western Pacific. It is through the efforts of these unglamorous, hard-working, virtually weaponless supply ships that the mobility of the U. S. Pacific Fleet is maintained.

ON THE MOVE — *USS Platte* (AO 24) takes on the job of refueling two ships at a time while underway.





Typhoon Detectives

ALTHOUGH NOBODY has yet been able to do much about the weather, there are people who can tell what kind is in store—and do a great deal about that.

Strategically based not far from the area where many typhoons are born is the United States Fleet Weather Central/Joint Typhoon Warning Center, Guam, a naval command under the Commander-in-Chief, Pacific Fleet.

The Navy and Air Force meteorologists working here cannot stop the terrific storms that boil up in the western Pacific, but they do watch, predict, and warn. These warnings permit military and civilian authorities throughout the area to ready their facilities for weather that may soon become hazardous to life and property.

The command is unique in that it is the only military command that combines the functions of a Fleet Weather Central, a U. S. Weather Bureau, and a joint command (Joint Typhoon Warning Center).

Fleet Weather Central, Guam, operates as a naval activity, while the Joint Typhoon Warning Center is under the direction of an Air Force

officer. Working under one roof, they provide services which complement each other.

FWC analyzes weather information and makes forecasts and warnings within the Pacific Ocean area west of 160 degrees east longitude and extending south below Australia and north to 80 degrees north latitude above the Asian mainland.

It also disseminates routine weather information for the public and government of Guam (normally a function of the U. S. Weather Bureau), and the Trust Territory Islands. Meteorological support for Commander Naval Forces, Marianas, and oceanographic services for U. S. armed services are other duties of FWC.

In support of the Seventh Fleet and other naval units, FWC broadcasts routine weather forecasts and issues wind warnings and special forecasts as required. Facsimile broadcasts (the transmission of weather maps, charts, photographs) are also made regularly.

In June, direct readout equipment was installed, to make it possible for FWC, Guam, to obtain information from the *Nimbus* weather satel-

lites. *Nimbus* will provide the FWC with a much-needed weather eye over the entire Pacific.

THE JOINT TYPHOON Warning Center does just what its title implies. It issues tropical cyclone warnings to all U. S. government agencies within its area of responsibility.

This area varies from that of FWC, extending from the international dateline on the east to the Asian coastline on the west, and south to the equator. Included in the center's duties are tropical cyclone research and preparation and distribution of the annual typhoon report.

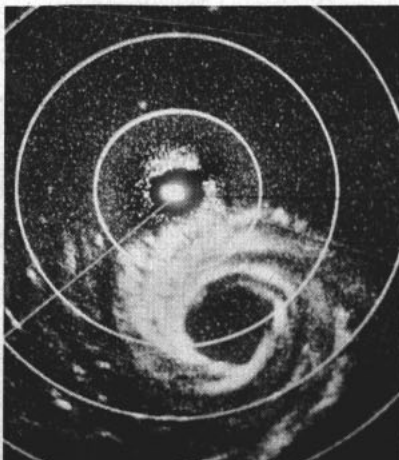
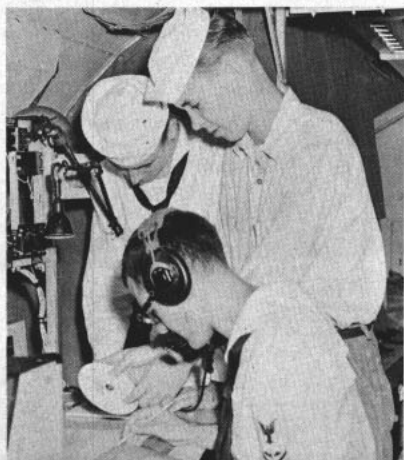
Two weather instrumented aircraft squadrons, one Air Force and one Navy, operate in support of typhoon reconnaissance requirements. They are the Air Force's 56th Weather Reconnaissance Squadron located at Yokota Air Base, Japan, and Navy's Early Warning Squadron One (VW-1), based at the Naval Air Station, Agana, Guam. The 56th recon squadron flies B-50 aircraft and VW-1 flies EC-121Ks (formerly WV-2s).

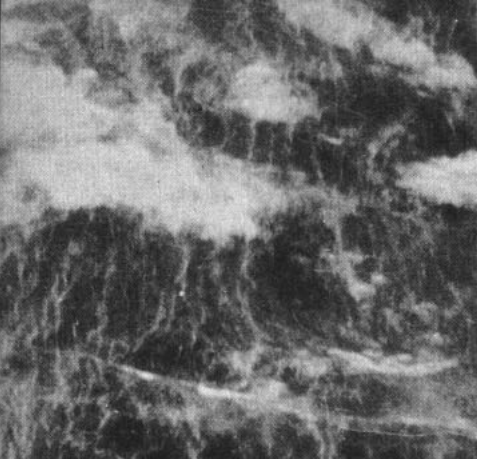
FWC AND THE Joint Typhoon Warning Center receive weather observations from civilian agencies, land stations, ships at sea, and aircraft of all nations over the Asian and Pacific area. Approximately 1350 weather reports are received daily. Navy and Air Force meteorologists maintain a 24-hour watch to analyze more than 30 weather charts a day based on these reports.

From these charts, the duty forecaster prepares warnings and forecasts for transmission by communication personnel.

The reports include the latest known storm position, maximum

BIG JOB — Cyclone photographed on scope. L: AGs track storm from plane.





winds, direction, speed, and probable positions of the storm 12, 24, and 48 hours ahead.

If the typhoon warning center at Guam should become unable to issue warnings, an alternate warning center at Fuchu Air Force Weather Central, Japan, takes over.

When typhoon Karen hit Guam in November 1962, the warning responsibility was passed to Fuchu, which responded so quickly that the scheduled warnings were on the air without a break in sequence. The warning center at Guam had accurately forecast Karen's track some 72 hours before Guam was hit, allowing islanders time to make maximum preparations for the big storm.

Other than the FWC at Guam, there are Centrals at Pearl Harbor, Kodiak, and Alameda. Their combined areas of responsibility cover the entire Pacific. FWC Guam is supported by two Fleet Weather Facilities, one at Sangley Point, P. I., and the other at Yokosuka, Japan. The Alameda FWC is supported by a weather facility at San Diego.

These are the Pacific FWCs and FWFs. Others are located at Suitland, Md., and Port Lyautey, Morocco. The Suitland FWC is backed by Fleet Weather Facilities at Argentina, Newfoundland; Quonset Point, R. I.; Norfolk, Va.; and Miami, Fla. FWFs at Keflavik, Iceland, and London provide support for FWC, Port Lyautey.

The procedures used by FWC, Guam, are much like those used by all Navy FWCs to protect aircraft, commercial shipping, fishing boats, and the people and property of a warning area, plus our own Navy's ships and stations.



GOOD SPOT — View over island shows section of Guam looking from Mt. Alutom towards Apra harbor.



Early Warning Cruise Over

NEAR THE ARCTIC CIRCLE—some-where between Iceland and Europe—a Navy crew is on duty, 6500 feet above the ocean.

Stars sparkle in the midnight darkness. Ice forms on the wings, props, and fuselage as the big aircraft passes through clouds in zero Fahrenheit weather.

Rising from a horizon of clouds at eye level with the airplane, the aurora borealis radiates a shimmering spectrum of light high in the sky.

There are 26 in the airplane, 24 regular crew members plus a photographer and a journalist. This flight is strictly operational, strictly routine. Crew One of AEWRON Eleven is patrolling the airborne early warning barrier in the North Atlantic.

And a topnotch crew it is. During the year 1962, Crew One led in two six-month competitions to win the Commander Barrier Force, U. S. Atlantic Fleet, "Outstanding Crew Award." The first crew to win the trophy a second time, it enjoys the added distinction of winning it in consecutive competitions.

Crew One mans a military modification of the "Super Constellation," EC-121K, formerly WV-2, *Warning Star*. Its unofficial Navy name is "Pregnant Camel" because radar equipment bulges very visibly from the top and bottom of its fuselage.

Generating a total of 13,000 horsepower from four engines, the EC-121K lifts about 70 tons of airplane, men, and equipment into the air in any kind of weather.

AS IT CRUISES along the barrier for 12 hours and more the *Warning Star* functions as a mobile, airborne radar station. It has generators providing enough electrical power to light a city block of apartment houses and a heating system capable of warming a block of residential homes.

Within the fuselage is a combat information center, a nest of men and machines that monitor the skies within a 250-mile radius and report every movement detected in the area.

Aboard the plane are bunks and seats where the crew members can rest when they are relieved from their positions. There is a flight galley for preparing hot meals. And there is ample space for storing parachutes, life-preserver vests, exposure suits, two big life rafts, fire extinguishers, and other miscellaneous items. Also stored in the airplane is the crew's luggage, which they would need if directed to land elsewhere than at the airfield from which they departed on the flight.

Runways may be packed with snow or glazed ice—storms may re-

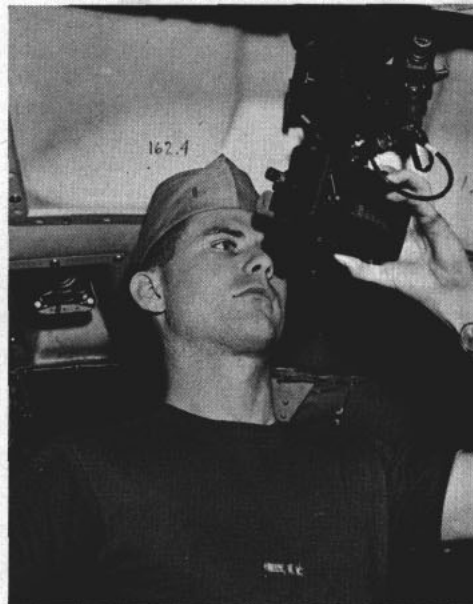
duce visibility to absolute zero—a rash of mechanical failures may ground some of the airplanes—and still the crews must patrol the barrier day and night, every day.

Barriers are an ancient mode of defense. More than 2000 years ago work began on the Great Wall of China. For centuries the Chinese continued to build the massive barrier. When completed about the year 1600, it extended 1400 miles, 20-30 feet high, 15-20 feet thick.

EARLY WARNING SYSTEMS to prevent surprise attacks are constantly maintained in the Pacific, across North America, and in Europe. Radar devices scan the skies, and detect and identify all approaching aircraft. Interceptor aircraft and retaliatory weapons are poised to engage an enemy attack. The radar warning system and its back-up defense forces serve to discourage enemy attacks and the combined system of warning, interception, and retaliation is called deterrent-defense.

If the system were not extended across the North Atlantic, there would be a vulnerable "line" around which an enemy could attack. The G-I-UK Line (Greenland-Iceland-United Kingdom), patrolled by the Barrier Force Atlantic, fills the gap between the deterrent-defense systems in North America and Europe.

ON GUARD — *Warning Stars* set up barrier in North Atlantic skies. **Rt:** LTJG M. T. Giles shoots stars.



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Barrier Atlantic

It is interesting to compare the Chinese Wall with the North Atlantic AEW barrier. The old wall was inert stone. The modern barrier is a living-moving force of men, aircraft, and electronic equipment. Compared in size, the Great Wall is dwarfed. The AEW barrier in the North Atlantic is more than 2000 miles long, 500 miles wide, 100 miles high.

APPROXIMATELY 25 crews compete for the COMBARFORLANT Outstanding Crew Award. Winning the trophy once is impressive. Winning it twice in succession is an unusual feat of consistently effective performance. Just to qualify for competition, a crew must accomplish at least 12 patrols during the six-month scoring period without a single aircraft accident or breach of communications security.

To surpass the other crews in two consecutive competitions, Crew One had to cope with more contingencies than a ball club encounters in repeating a pennant win. Three of the conditions of crew competition in the COMBARFORLANT league are weather, personnel changes, and just plain luck.

Unpredictable Arctic weather makes for hazardous conditions along the barrier. Almost without warning, storms of howling winds, lightning,

and freezing rain or hail rage in the North Atlantic sky, then suddenly subside. Crews must fly according to schedule regardless of weather conditions however severe they may be.

Crew members come and go according to the Navy system of rotating personnel regularly, so that an entire crew of seasoned barrier veterans is only a theoretical entity. For instance, only six now remain of the 24 members who were in Crew One just a year ago.

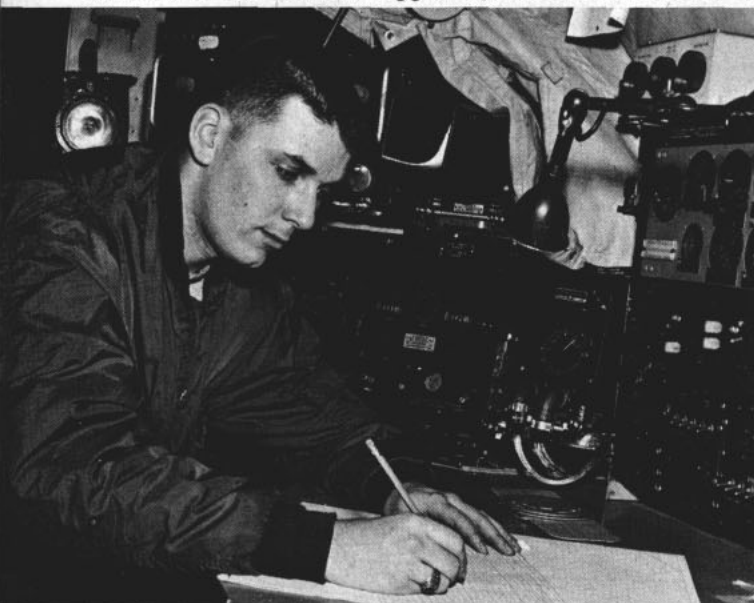
Lady Luck may have her favorites among the barrier crews, as she does elsewhere; however, she seems generally to favor those who are thorough. No matter how carefully a crew inspects and maintains its aircraft and equipment, it is possible that unpredictable failures will occur, but they will occur less often. Whenever a crew fails to take off within 12 minutes of the scheduled time, they lose points in crew competition.

For evaluating crew competition, four performance factors are considered: readiness, radar, ECM (electronics countermeasures), and communications.

Readiness of the aircraft, its equipment, and the crew to fly the barrier on schedule amounts to 25 per cent of the total score. Another 40 per cent is computed from the radar contacts reported, and 10 per cent more



NAVIGATIONAL data is logged by ENS R. A. Garret; W. C. Coffin reports contact; copilot checks plane.





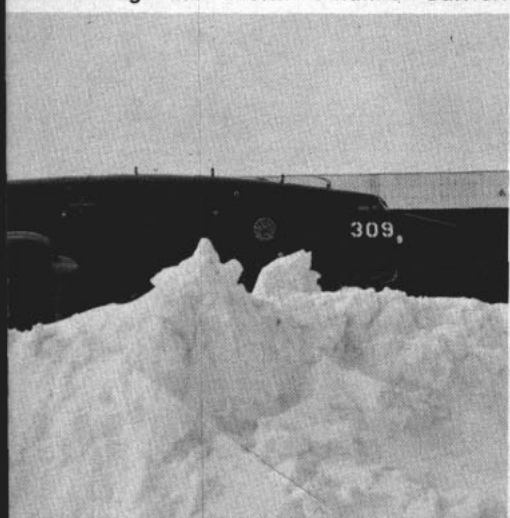
PLOTTERS C. D. Stroud and J. W. Ravan locate contacts. Rt: Radioman sends message back to headquarters.

from ECM contacts. The remaining 25 per cent of the score comes from evaluating the promptness and accuracy of properly transmitted radio messages.

CREW ONE'S PATROL PLANE commander, CDR Charles C. O'Hearn, USN, emphasizes the importance of each crew member working as a team man in the accomplishment of total crew responsibility. After years of experience and more than 5000 logged pilot hours, his formula for trophy-winning performance is to have a crew that is able and ready to "do the right thing at the right time."

It is not enough for each man to be expert at his own job. He also has to know about the jobs of all the other crew members, and understand how his work contributes to what the others do. Some men are cross-trained to handle two, three, or even more crew positions.

SNOW JOB — Operating in adverse weather becomes routine when flying the North Atlantic Barrier.



A FLIGHT BEGINS long before the aircraft actually gets into the air. Crews are on standby status for six hours before the scheduled takeoff. The flight engineers are at the hangar three hours before takeoff to inspect and pre-flight the airplane.

While the copilot is at flight operations to file the flight plan and pick up the weather report, the navigators are working on their charts. The PPC, CIC officer and his assistant, and radioman are at the BARFORLANT Operational Control Center where they are briefed on the foreseeable conditions and circumstances of their patrol.

Within 45 to 60 minutes before takeoff all members of the crew are aboard the aircraft completing final preparations for the flight.

The PPC, besides being the senior pilot, bears complete responsibility for the personnel and aircraft under his command while in flight. Now a 45-year-old veteran of 26 years' naval service, CDR O'Hearn enlisted in the Navy in 1936. He advanced step by step from Apprentice Seaman to Chief Aviation Machinists Mate, completed flight training, and became an enlisted pilot.

In 1946 he was appointed LTJG, and in 1947 the Navy sent him to study at Ohio State University under the Holloway Plan. Completing a normal four-year college education in 21 months, he graduated cum laude in the spring of 1949 and returned to duties as a naval aviator.

COPILOT LT Francis A. Harding, USN, flips a switch and illuminates the right wing. Ice is forming on it as he works the controls. A rub-

ber boot along the leading edge inflates, breaking loose a crust of ice.

Flight engineers John Warren, AMM1, USN, and Philip Wilson, AMM2, USN, are at a panel of instruments and controls just behind the pilot and copilot. Basically, they operate the four engines of the airplane by controlling power settings and fuel mixtures. They also manage the distribution and balance of weight in the airplane, post log entries, note mechanical discrepancies to be fixed by the ground crew, and ensure that the airplane is ready for flight.

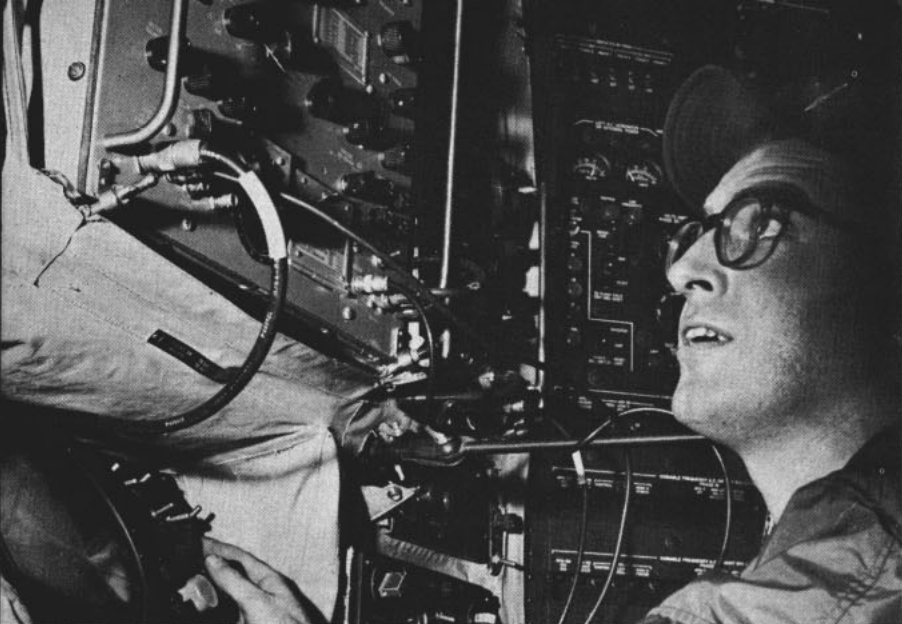
Navigator LTJG Michael Giles, USN, is at work near the middle of the cabin where there is a panel of instruments, charting table, periscopic sextant, drift sight, and other navigational aids.

Opposite him is the radioman position. Ted West, AET1, USN, and Stephen Ingram, AET3, USN, send an average of 65 messages during each patrol. In addition to handling message traffic they maintain electronic equipment used by CIC and the navigators, plus their own communications equipment.

ABOUT ONE-THIRD of the cabin space is occupied by CIC equipment and technicians. In darkness they read red-illuminated instrument dials and intently watch luminous flecks of green appear on the radar scopes. One radar antenna searches a circular area 500 miles in diameter while another antenna searches vertically to find the altitude of approaching aircraft.

Radar and ECM contacts are relayed to the plotting table and there changed into geographic locations.

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CHECK UP—Technician H. L. McCasland checks electronic gear. Rt: J. H. McCarty enjoys steak dinner.

This information is checked by the CIC officer and then transmitted to the BARFORLANT Operational Control Center. Within but a minute or two after a contact is made, CIC must have its report in the Operational Control Center in the headquarters of Commander Barrier Force, Atlantic.

LT George Murphy is the CIC officer and Assistant CIC officer is Chief Air Controlman Leonard Downs. He alternates on watch with LT Murphy.

Aviation Electronics Technicians Harold McCasland and Norman Greene constantly check the electronic equipment to see if it is operating normally. Should repairs be needed, they have enough tools and spare parts aboard the airplane to correct most malfunctions and failures. They know their equipment.

THE REMAINING 12 members of the crew perform the same kind of duties, so that there are always eyes, ears and minds on the alert in the large aircraft.

Time passes in segments of work and rest on patrol. Each position is relieved at about three-hour intervals. During rest periods men may sleep, read, play cards, chat, or otherwise relax. If they are hungry, they can have a hot meal or a sandwich. It is most important to return to work refreshed and alert. "Constant Vigilance" is the watchword of the barrier.

Eventually BARFORLANT OpCon sends word that Crew One has been relieved on station. Soon someone sights the relieving plane coming to continue the patrol and everyone is

happy to be heading for the hangar for a well-earned rest. The rest does not come immediately, however.

After returning from the barrier, an hour or so is required to clean up and post-flight the airplane. During that time the PPC, copilot, CIC officer and his assistant are in OpCon for debriefing. There they review the flight and discuss the crew's performance.

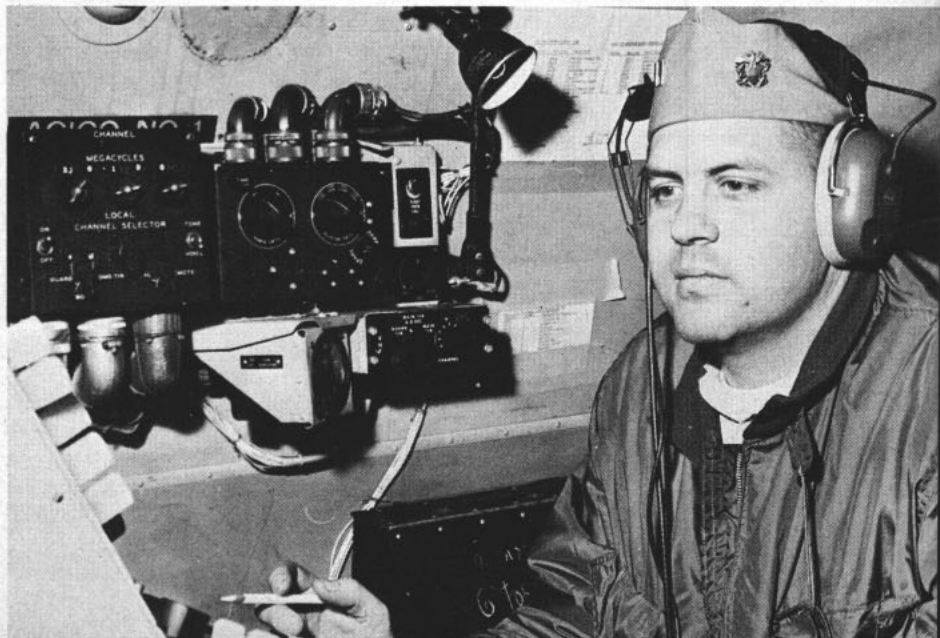
Finally, everything has been done and Crew One can return to the quarters they left some 18 hours earlier—wary—a bit disheveled—another bout with the weather won—another patrol successfully accomplished—knowing that for another day they helped keep the Free World protected behind the Atlantic airborne early warning barrier.

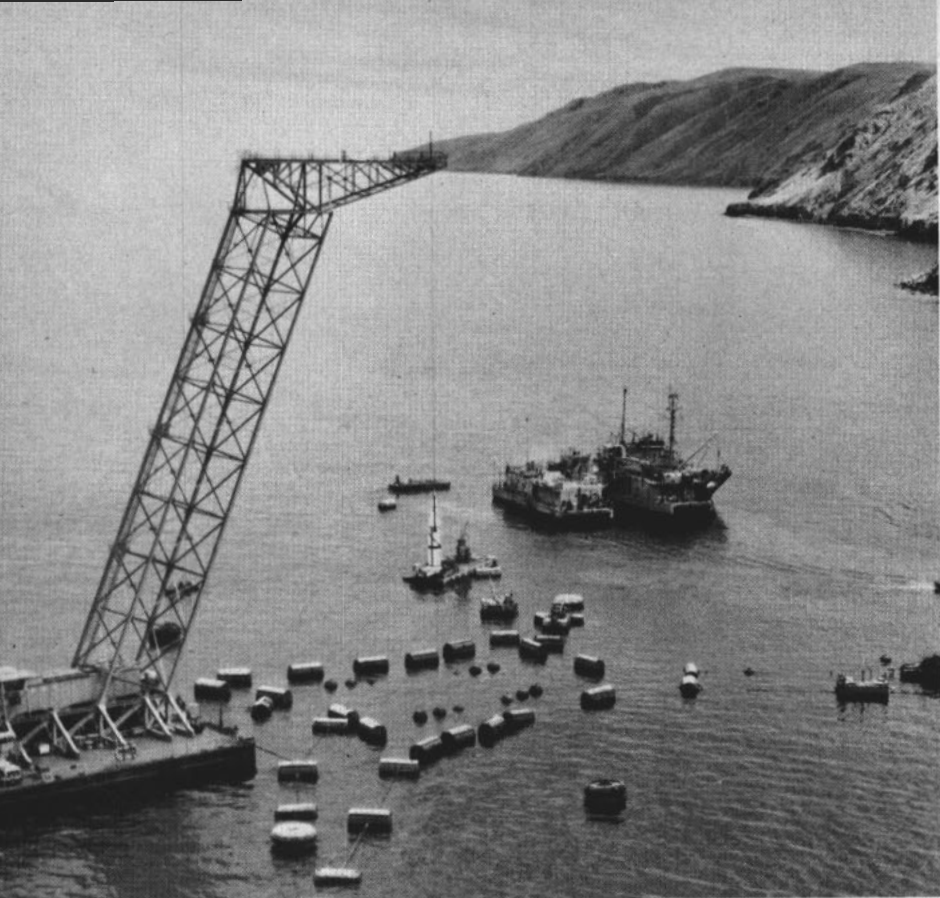
—Story by W. R. Green, JOCA, USN.

—Photos by M. C. Rankin, PH3, USN.



ON SCOPE—LT G. A. Murphy monitors radar. Above: A prized trophy.





The Fleet's What-Is-It Ship

The following report concerns USS Butternut (AN9), which has staked out a few first, longest and only claims for herself. A brief historical sketch of the ship was given in the Letters to the Editor section of the February 1963 ALL HANDS. This prompted the ship's first lieutenant, Ensign W. E. Keegan, III, to fill us in with more details on Butternut.

WAR WORK — A net layer uses lifting power to repair a net protecting harbor from torpedoes in WWII.



WHEN Butternut pulls into port she usually sparks a standard question from waterfront visitors—"What is it?"

With a cluttered superstructure, part of which appears to have been added as an afterthought, the main deck laden with machinery, a bulging stern section, torpedo mounts, and two massive forward horns jutting upward and forward, Butternut looks like some weird seagoing vagabond squatting in the water.

She's an old-timer—so old that she claims to be the third oldest ship in continuous service since commissioning.

Grandma Butternut refuses to submit to age. This is one old dog that has learned enough new tricks to keep herself in demand even after the need for services for which she was designed has disappeared.

Though the net layer retains her designation and capability, she has not laid a net for several years. Harbor defense is accomplished by more modern methods today.

Proving her missile-age usefulness, Butternut is on the bandwagon for something as recent and modern as

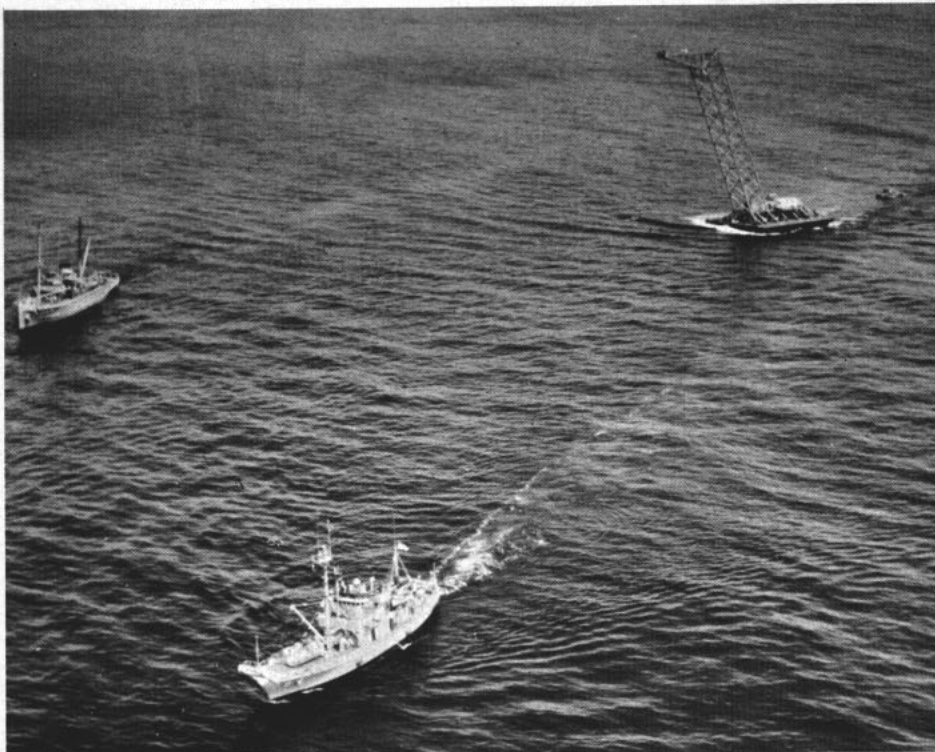
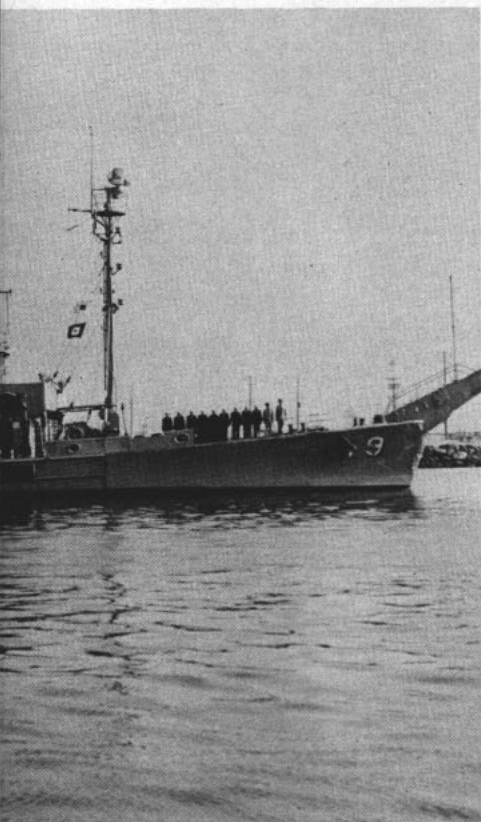
the Polaris program. She is assigned to the Naval Ordnance Test Station, China Lake, Calif., as support ship for the "Pop-up" program, for test and development of Fleet Ballistic Polaris missiles.

Butternut has been in continuous service since May 1942. She was classified as a boom (net) tender (YN4) until 1944, when this was changed to the present designation.

She is the only auxiliary net layer of her class (*Aloe*) still on active duty. Only one other net layer, USS Nahant (AN 83), a *Cohoes* class vessel, is on active duty. Nahant operates with MINLANT, and is homeported in Charleston, S. C.

The 700-ton Butternut is 162 feet long (including overhorns), and has a crew of four officers and 48 enlisted men. Her two 600 shaft-horsepower diesel engines provide enough power to allow the ship to chug along at maximum speeds of approximately 12 knots.

The most distinctive feature of the ship is her two 18-foot-long forward horns, or fixed booms. During World War II, the net tenders used these booms to stream heavy steel anti-



POP UP — *Butternut* stands by for recovery as *Polaris* test vehicle breaks the surface. Above: *Netlayer* tows the 'fishhook' back to Long Beach.

Has Horns

submarine and torpedo nets across the mouths of strategic channels and harbors.

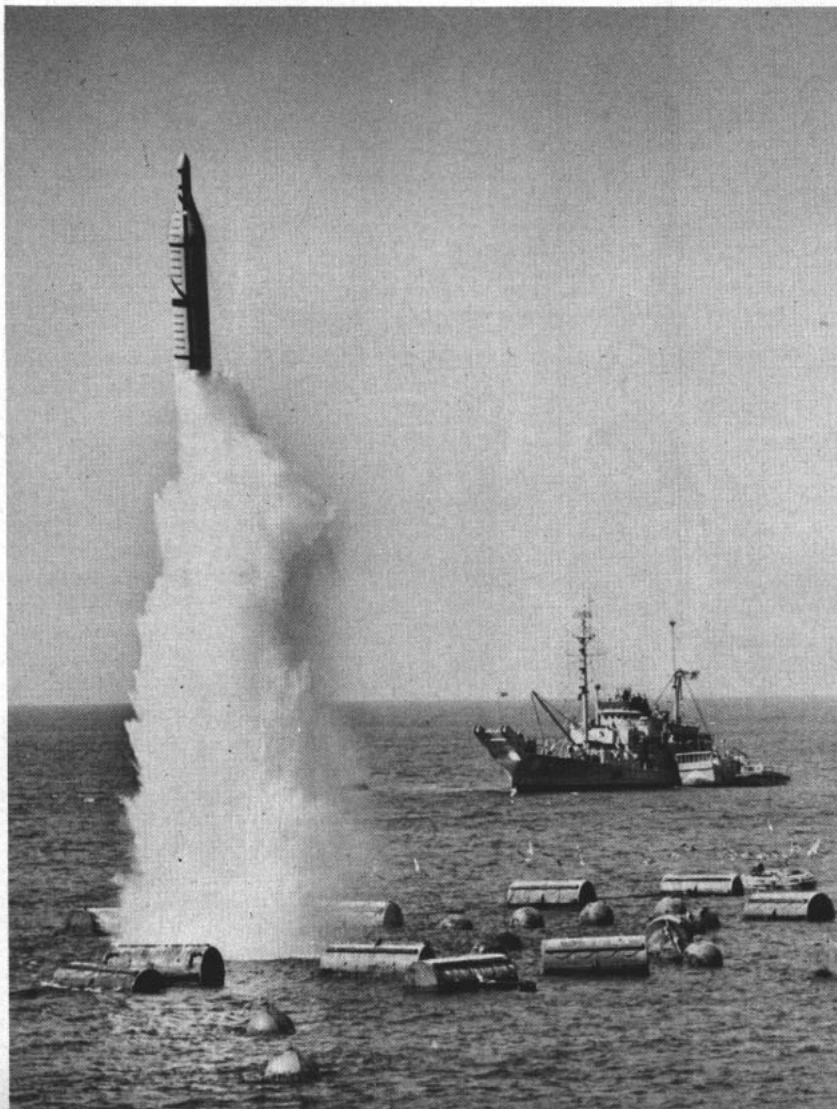
Butternut has traveled extensively in the Pacific. Starting 1 Jun 1942 she never saw a stateside port for 10 years, two and one-half months. During that time she earned one battle star on her Asiatic-Pacific Area Campaign Medal and another on the Korean Service Medal, plus the United Nations Service Medal, Republic of Korea Presidential Unit Citation Badge and assorted other medals.

Her travels have included Japan, New Caledonia, New Zealand, New Guinea, the Philippines and the Marianas and the Marshall Islands in the Pacific.

From 1952 to 1957 *Butternut* was assigned to the control of Commandant, 11th Naval District, and served as training ship in the various net, buoy and underwater operations. Now, besides supporting "pop-up," her operations include towing duties, hydrographic surveys, and acting as a test platform for the firing and evaluation of new torpedoes.

Butternut means interesting duty.

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ON THE RUN — UDT trainees at Roosevelt Roads run to breakfast. Below: Bomb is unshackled at dump.



ON VIEQUES bombs are loaded for trip to bunkers.

For EODs Nothing

NAVY AMMUNITION handling teams and explosive ordnance disposal teams are busy on islands in widely separated parts of the world—the Western Pacific and the Caribbean to mention only two. On Vieques Island, seven miles from Roosevelt Roads, Puerto Rico, 21 men move and store explosives, and provide security patrols for the island honeycombed with ammunition bunkers.

And on the Pacific Island of Guam, a six-man Navy Explosive Ordnance Disposal (EOD) team is working with the Trust Territory government to clear Guam and the neighboring islands of ammunition and explosives left buried in huge caches at the end of World War II.

While most of Guam's collection consists of unfired artillery shells and unused hand grenades, occasionally a piece of misfired ordnance or ammunition is found. This, needless to say, must be handled with gentle care.

A Marine hiking on Guam found an eight-inch shell midway between the cross-island road and Mt. Tenjo not long ago. He reported the discovery to the EOD team and two men were sent to investigate.

Since the 260 pounder was a dud—thought to have been fired by a cruiser during World War II—it had to be handled very carefully. Because there were no people, homes, or farms in the area, it was detonated on the spot. This was done by means of a counter charge of handset explosive planted beside the projectile.

The Guam EOD team works in pairs, sending two men to work on Saipan for a week at a time. Upon leaving Saipan, however, there is still much to keep them busy, because the team does similar work on Yap, Ponape, Palau, Chichi Jima, Ulithi, Tinian and several even smaller islands.

THE MEN on Vieques Island in the Caribbean don't have it easy, either. They don't have the opportunity to enjoy many of the routine facilities available to most Navymen, but with two of their scheduled three months on Vieques completed, only two of the 21 prefer to return to Roosevelt Roads. The others are ready to remain as long as they are allowed to stay.

Built by the British during World War II, the U. S. Naval Ammunition Depot on Vieques is now undergoing a rehabilitation program. Some 7000 acres on the



CHARGE IT — EOD's set charge by old shell on Guam.

Too Hot to Handle

western end of the island make up the depot. Meals for the men are either flown in from Roosevelt Roads, or are obtained at the U. S. Marine Corps' Camp Garcia, on the eastern end of the island, some 20 miles from the depot by road. The only liberty town is Isabella Segunda, 10 miles from the depot.

The EOD team from Guam began its work on Saipan in May 1962, collecting 180,363 pounds of ordnance during their first month of work. From June through July they picked up 563,231 pounds, 300,000 in July. They added 416,000 pounds in August and September and set a record in October, picking up 372,000 pounds of ordnance. When typhoon Karen struck in November, work on Guam's neighboring islands was temporarily halted, but the team used the break to clear newly found caches on Guam.

In January a two-man team went to Ponape to clear a boat channel. Then they moved to Mokil island and set off 17,000 pounds of explosives to clear another channel so the islanders could remove their copra by boat at low tide.

Safety lectures are given from time to time to school children of Saipan and Tinian by the EOD team. The children are taught to be on the alert for explosives and what to do in case they find any.

—Phill Upton, JO2, and Bill Missett, JO2

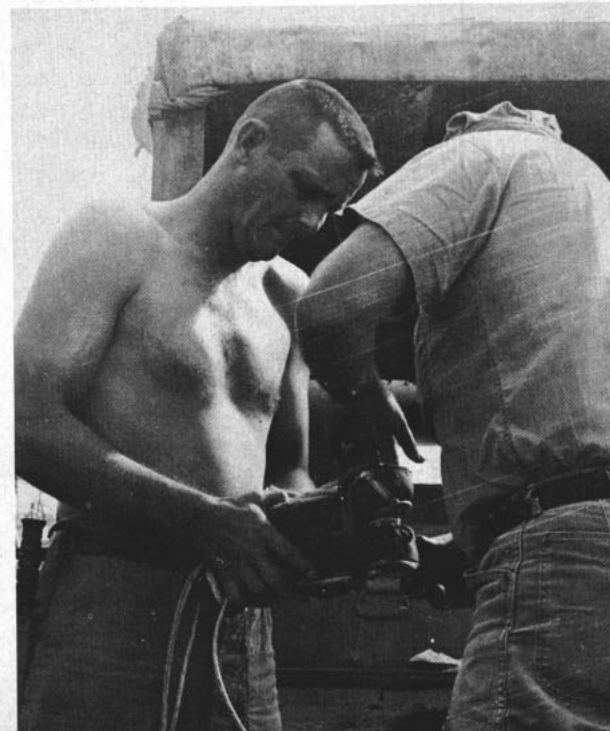
BLAST AWEIGH — Ordnance is destroyed on Saipan.



SHELL GAME — EOD member sets fuse on old shell.



CLEAN SWEEP — Navy demolition men load grenades for disposal (below), prepare countercharge for blowoff.





INTRODUCING:

THE PHILIPPINE NAVY

THIS YEAR THE youthful Philippine Navy celebrated its 24th birthday as the small, but colorful, sea service of a maritime nation that is made up of some 7000 islands in the world's largest ocean.

Although the Philippines gained her independence on the 4th of July, 1946 (in a historic joint celebration

with the United States, honoring a double Independence Day), the sea service of this nation had its origin several years earlier.

The Philippine Navy can be said to date back to 9 Feb 1939, when a unit of the Philippine Army was organized with the title of Off Shore Patrol. At that time it started out

with three motor torpedo boats (of British design) and about 60 men. The unit's primary mission was to extend the range of coastal defenses in the event of war, and a 10-year period of expansion was planned, during which more seagoing personnel would be trained and additional units acquired as soon as possible.

ON DECK — Philippine navymen stand formation in dress blue uniform on deck of RPS Batanes (T 65).



Within a few short years it was to undergo its test under fire. In World War II the Off Shore Patrol engaged in limited patrol operations along the coastlines of Bataan and Corregidor, against the tight enemy blockade, to bring much-needed supplies, medicine and foodstuffs to the beleaguered troops.

The unit was cited for gallantry in action when its Q-boat Squadron shot down three of 12 Japanese planes bombing nearby shore installations in Bataan. Afterwards it participated in the evacuation of high Philippine and U. S. government officials from Manila to Corregidor when Manila was declared an open city.

After the war, the Off Shore Patrol was reactivated under Major Jose Andrada (a U. S. Naval Academy graduate, class of 1927, who also served as the first head of the OSP when the unit was first activated in 1939). With barely nothing—but ideas—to begin its job, the unit reorganized, ready to build from a nucleus of its men who had survived the war, plus additional recruits.










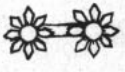


















THROUGH THE United States-Philippine Mutual Defense Assistance Pact, the Off Shore Patrol received a big boost, in the form of 96 vessels of various categories from the U. S. Navy.

On 4 Oct 1947 the Off Shore Patrol was redesignated the Philippine Naval Patrol, and was given the mission of conducting sea patrol operations and defense action in Philippine waters. It was also given the mission of assisting government agencies in the enforcement of laws and regulations pertaining to customs, revenue, navigation, immigration, fishery, quarantine and neutrality of the Philippines. (As a result of its operations against smuggling alone, the Philippine Naval Patrol saved the government 5,000,000 pesos in revenue from 1947 to 1951.)

In mid-1949 Major Andrada, who now holds the rank of Commodore, was relieved by Commander Jose Francisco, another Naval Academy graduate, who also rose to the rank of Commodore.

CDR Francisco, upon assumption of office as Commander of the Philippine Naval Patrol, ordered the reorganization of shore and operating units into compact forces to cope with the problem of combating communist and dissident elements who were increasing their activities in

UNIFORM INSIGNIA OF THE PHILIPPINE NAVY

NAVY	MARINES	NAVY	MARINES
	COMMODORE BRIG. GENERAL 		CHIEF PETTY OFFICER M/SGT 
	CAPTAIN COLONEL 		PO 1ST CLASS T/SGT 
	COMDR. LT. COL. 		PO 2ND CLASS S/SGT 
	LT. COMDR. MAJOR 		PO 3RD CLASS SGT 
	LT. SENIOR GRADE CAPT. 		SEAMAN 1st CLASS CPL 
	LT. JUNIOR GRADE 1st LT. 		SEAMAN 2nd CLASS PFC 
	ENSIGN 2nd LT. 		APPRENTICE SEAMAN PVT 

NOTE: THE UNIFORM INSIGNIA FOR MARINES ARE THE SAME AS THE ARMY

smuggling and piracy in the Sulu Sea.

The Patrol Force, Service Force, Philippine Marines and Sulu Sea Frontier were activated, and in a year's time these units succeeded in reducing the resurgence of lawless activities.

THE PHILIPPINE NAVAL PATROL became a major service of the Armed Forces of the Philippines on 22 Dec 1950. The signing of Executive Order 389 changed the designation of the Philippine Naval Patrol to the Philippine Navy.

The new Navy was charged with the organization, training, maintenance

and operation of naval forces and aircraft, including naval reserve units, and also was called on to assist in the enforcement of laws and regulations on customs, revenue, fishery, neutrality and immigration.

Some of the Navy's major accomplishments were the transport of Philippine troops to Korea during the Korean conflict, the evacuation of stranded Filipinos from Shanghai on the eve of the Chinese communist occupation, plus mercy, relief and rescue operations and economic development missions.

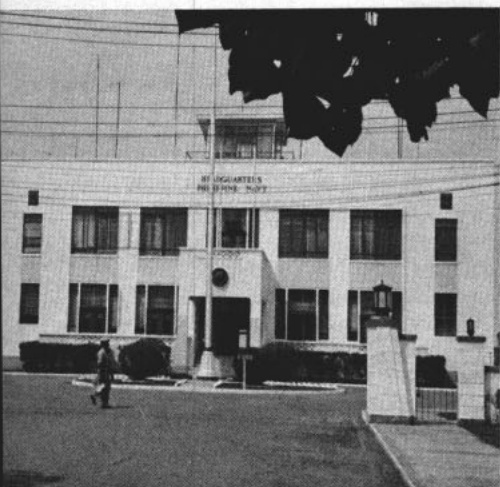
The Philippine Navy, despite its relatively small size as compared to the other major services of the armed

ROUGH RIDERS — Frogmen of the Philippine Navy gain combat experience during amphibious exercise as they prepare to clear way to the beach.





IN THE SWIM — Philippine troops unload in exercise with U. S. Seventh Fleet. Below: HQ of Philippine Navy.



forces of the Philippines, has actively carried out the Philippines' international commitments with the member nations of the Southeast Asia Treaty Organization. It has participated in naval exercises for the defense of the free nations, most recently in such SEATO exercises as *Albatross*, *Sealink*, *Phiblink* and *Halang Dagat*. The latter was a SEATO harbor defense exercise sponsored by the Philippines.

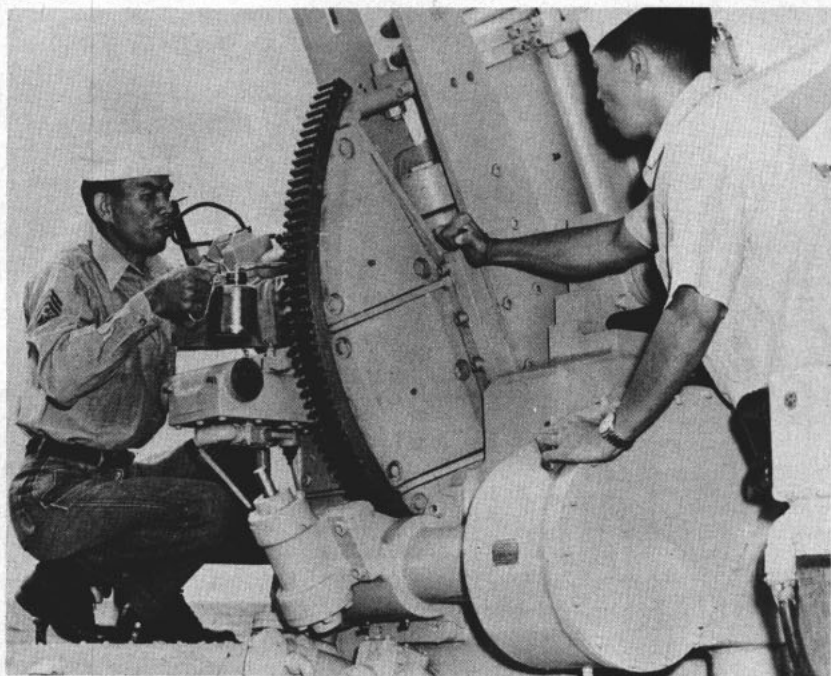
Since last September, when Commodore Simeon B. Castro retired, the Philippine Navy has been led by Commodore Juan B. Magluyan, who served as its Acting Commanding

Officer until his recent promotion.

Statistics on the exact size of the Philippine Navy today are classified. However, its fleet contains ships of the following categories: High speed transport destroyers, called APDs; patrol craft, escorts of the PC and PCE class; subchasers; coastal mine-sweepers; medium patrol gunboats (PGMs); patrol boats (PBs); amphibious ships such as LSTs and LSMs, and transport and communication ships. Also in the Philippine Navy are miscellaneous vessels such as cutters, tenders, and yard craft.

The Philippine Navy has a naval base at Cavite. Its Navy Yard is capable of building small vessels, but its basic mission is to outfit and repair ships of the Naval Operating Forces.

SHOOTING IRON—Three-inch/50-caliber gun is checked and adjusted.



THIS IS THE MAKE-UP of the Philippine naval operating forces:

- *The Patrol Force* maintains antisubmarine, surface and mine-sweeping vessels that are continuously engaged in patrolling and law enforcement.

- *The Service Force* maintains transport ships (LSTs) and small craft which transport military equipment, settlers, construction equipment and relief supplies for national improvement, as well as performing limited patrol.

- *The Marine Force* is the Navy's fast-striking garrison force, which performs intelligence and reconnaissance missions, as well as police missions in troubled spots of the Philippine archipelago.

The primary mission of the Philippine Navy today is to train its

men to be ready for any emergency. This is achieved through a training program and exercises with the navies of the Southeast Asia Treaty Organization nations, of which the Philippines is a member. Filipino sailors train both ashore and afloat with units of the U. S. Navy.

The Philippine Navy has a quota of one officer a year at the U. S. Naval Academy. Candidates are selected under open competitive examinations.

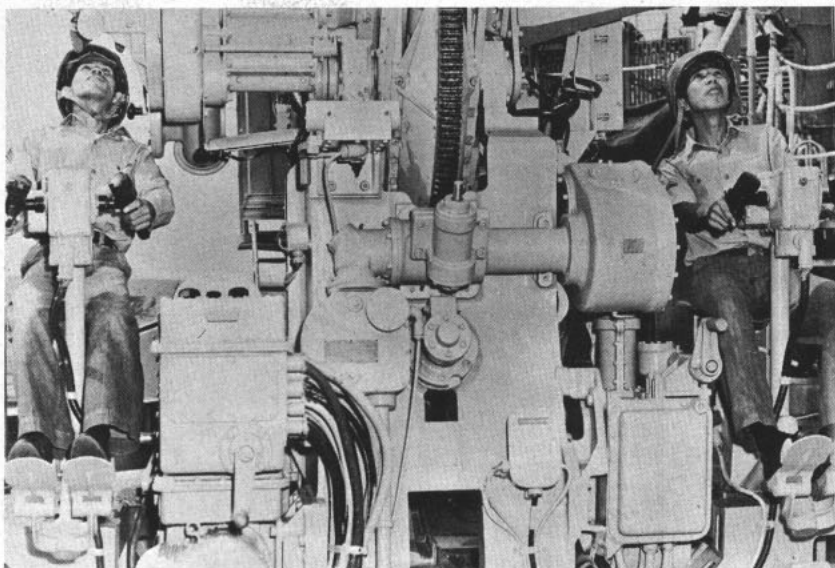
The country's naval training program is aimed at developing proficiency in antisubmarine warfare, minesweeping, amphibious operations and surface actions designed to repel external aggression.

Before a recruit can be admitted into the Philippine Navy he has to pass rigid general classification and battery tests to determine his ability to acquire technical skills. These skills range from simple clerical work to engineering and electronics. Hand in hand with the training for specialized skills is the training for physical fitness, military discipline and good citizenship.

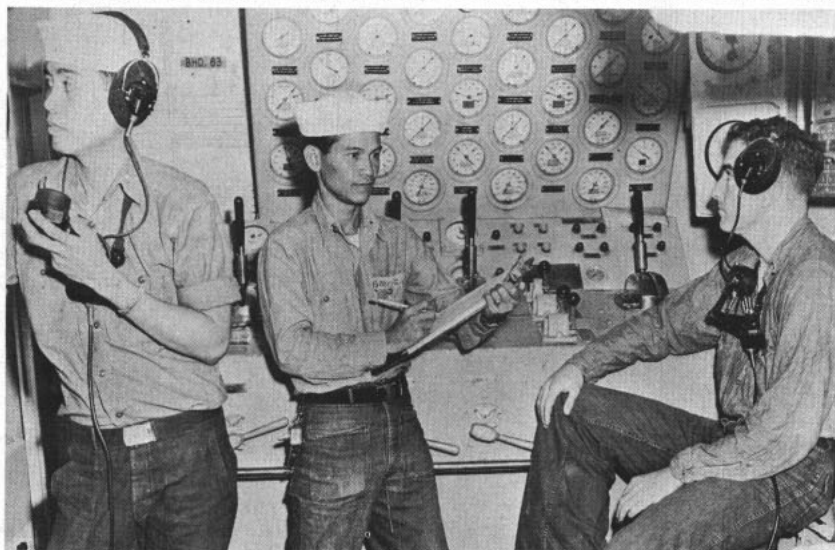
Seven educational institutions are now conducting Naval ROTC courses to help build up the strength of the island nation's Naval Reserve.

This is the Philippine sea service. Despite its youth and size, its Navy-men have a spirit that is traditional with men of the sea.

In a nation of 7000 islands, with 14,700 miles of coastline, and a water area four times the size of its land, the Philippine Navy has an important and challenging role.



HELPING HANDS — Philippine sailors man gun mount and (below) learn engine room routine during training cruise aboard Seventh Fleet ship.



READY GROUP — Philippine Navy's marines and amphibious units can move in on trouble spot at moment's notice.



NAVY'S

AT NAS Cubi Point, in the Philippines, there is now in operation a team of U. S. Navy paramedics. It is composed of two flight surgeons, two corpsmen and two men who are also qualified as parachute riggers.

What are paramedics?

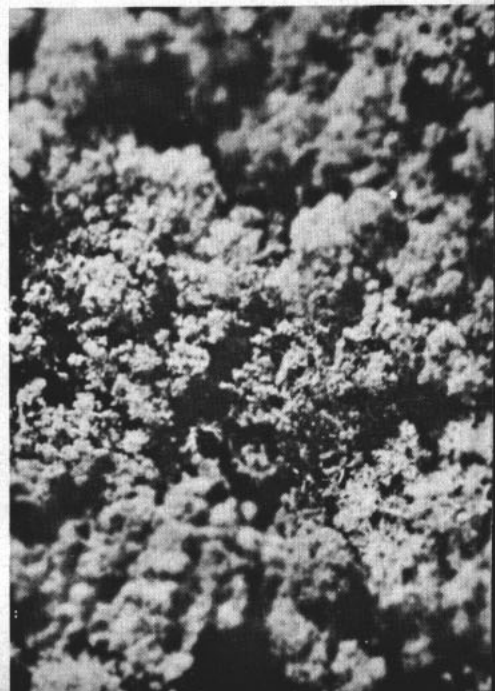
When a plane crashes in a remote area which can't otherwise be reached, the team jumps to bring the skill of medical science to the stricken crew. This explains its job, which is to provide medical help to men in an emergency via a parachuting team qualified to lend necessary medical assistance.

The idea of paramedics is not new. However, at Cubi Point the USN team received its start in mid-1961, when a Navy chief became interested in the paramedic training given to a group of Philippine Air Force men at Clark Air Base, P. I.

The need for a paramedic team at Cubi Point was demonstrated several months later when a plane crashed at Palawan (several flying hours from Luzon) with seven men on board.

A helicopter was dispatched to land a medical team near the crash scene. The only accessible spot was the sea, and the water was too rough to attempt a water landing. At the same time the copter was hindered by an oil leak, and had to turn back to its base.

By the time a surface ship reached the crash site, all but one of the



PARAMEDICS ON LOCATION

plane's crew were dead.

This incident was the catalyst which sent an officer and a Navy chief who were eager to learn the job to Clark Air Base for intensive voluntary paramedic training (at their own expense).

For two weeks at Clark, the volunteers practiced parachute landing falls, parachute packing, road running and actual jumps.

Although official recognition of the paramedic team had not yet been given, the Navy jumpers managed to cumshaw 12 T-10 chutes and reserves, jump helmets, medical jump bags (for medical personnel) and general purpose survival bags for non-medical personnel. Four more Navymen were soon in training, completing six jumps as part of their indoctrination.

The first opportunity for the team to go into action came in August 1962 when a United States seaplane crashed into a mountain about 60 miles from Cubi Point.

This was at the peak of the five-month rainy season during which 145 inches of rain falls. Fortunately, after the wreckage was spotted, the paramedics, qualified for any kind of jungle penetration, were able to land within 50 yards of the wreckage.

One member of the crew had survived the crash. The paramedics gave him first aid, made him a litter and placed him on board the heli-

copter with a corpsman for the trip back to Cubi Point.

The two remaining members of the team stayed at the site and did what they could. The weather closed in and the paramedics had an opportunity to put into operation what they had learned about survival in the jungle.

In October 1962, the Chief of Naval Operations officially recognized the paramedics and they were designated naval parachutists. They increased their training schedule—adding jungle jumps, night jumps, high wind jumps, and equipment jumps to their training. They also began jumping at increasingly shorter intervals.

The medical officers on the team jump with bags of medical supplies which weigh about 20 pounds each.

The corpsmen's bags are similar to those carried by the medical officers, but differ slightly in their contents. The parachute riggers carry a general purpose survival bag which weighs between 45 and 50 pounds. It contains a tent, C-rations, machetes and a signal paulin.

Each member of the team carries a minimum amount of personal survival gear which includes a machete, insect repellant, mirror, flares, knife, and food concentrates.

For jungle jumps, each team member wears a jungle suit to protect himself against injury from tree landings. He also carries 120 feet of

rope to lower himself to the ground plus about 35 feet of reserve chute line.

Another part of the team's equipment is an aircraft accident investigation/medical kit. A larger medical survival drop container weighing about 50 pounds is delivered by cargo chute. With these supplies the team can perform minor surgery, if necessary.

After official recognition was given, the team began replacing its cumshawed equipment with more adequate supplies. For instance, the T-10 chutes were replaced with more steerable silks.

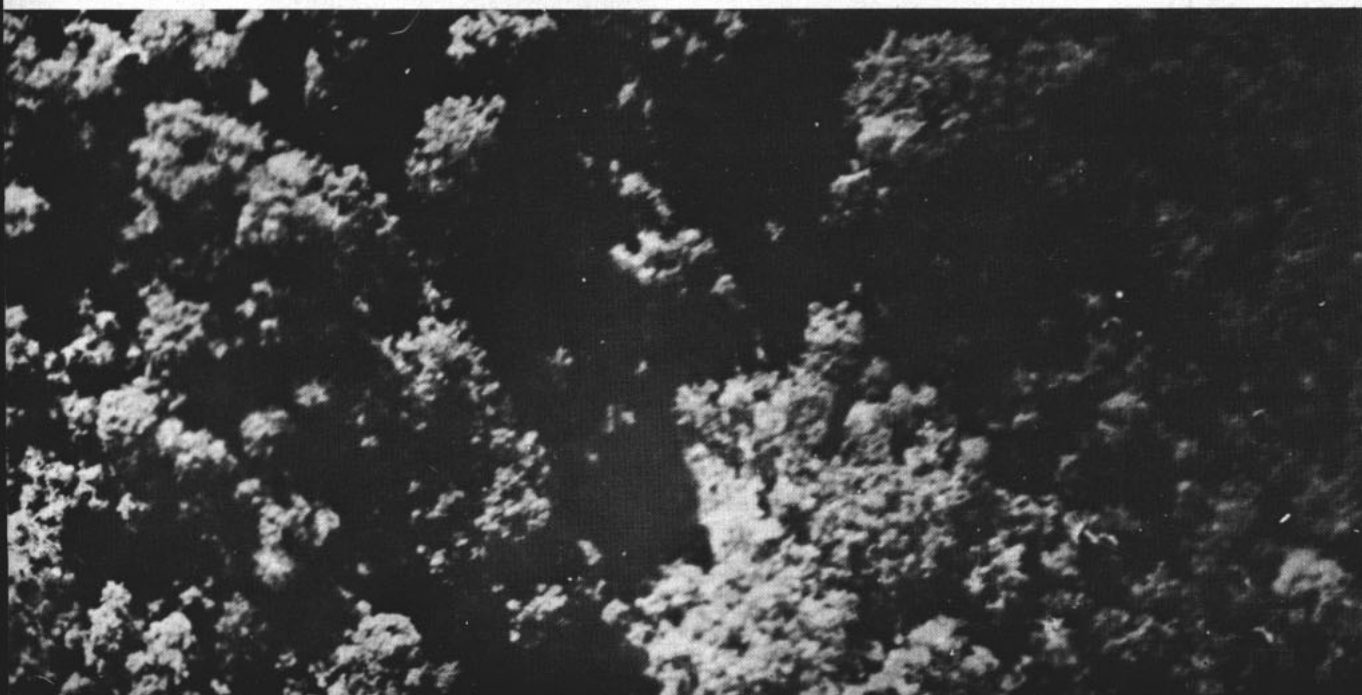
Now that the foundation is laid, the Cubi Point paramedics hope their replacements will be qualified parachutists when they arrive. However, being a parachutist doesn't make a paramedic.

The first team at Cubi Point used existing techniques when they started their training.

Since then, they have adapted generally accepted techniques to suit their particular work, the terrain and the climatic conditions of the Philippines.

The first team made hundreds of jumps and collected plenty of bruises for their efforts but the rewards for their services are the lives of men who would otherwise have lain helplessly injured in a plane's wreckage in the Philippine jungle.

— David Davis, LT, MC, USN





Research Reservists on TV

Life in a Fallout Shelter

SEVERAL WEEKS AGO 34 USNR officers—members of the Research Reserve Program—reported in at the National Naval Medical Center, Bethesda, Md., for their annual two weeks of active duty for training.

At 1330 on a Monday afternoon they assembled in a fallout shelter and heard a lecture by a member of the Naval Medical Research Institute. In his concluding remarks the officers noted that the Navy needed information on the use of shelters under realistic conditions. The best way to obtain this data, he said, would be to place people in a shelter without warning and require them to live in it for a time.

And so it happened that the Research Reservists were asked to cooperate in such a study by remaining—voluntarily, of course—in the shelter for an indefinite period.

PRIVATE EYE — Television cameras kept close check on Research Team during its stay in lab's fallout shelter.



All volunteered to stay on board. This experiment marked the first time that a fallout shelter trial had been conducted without giving the participants advance warning or an opportunity to make preparations before entering the shelter.

The men were given no special briefing on the operation or the use of the shelter.

It was up to them to learn how to make use of whatever they found there.

They slept in their clothes and lived on a ration of special biscuits and soup. Since only a limited amount of water was available, they were unable to shave or use water for washing. Small packets containing moistened paper washcloths served in place of soap and water. The only extra ration provided was a supply of gum.

TO MAKE THE SITUATION more realistic, a radioactive pellet was lowered into a tube just outside the shelter. The men were told that they could leave when the radioactivity dropped to a safe level. Beginning on Tuesday, men dressed in special anti-fallout suits left the shelter each day to measure the amount of "radioactivity" outside. Using laws of radioactive decay, they were able to calculate the date of their release.

More "realism" was injected into the test on Wednesday when three men emerged from the shelter to take routine monitoring readings of the radiation outside. The trio was showered by "radioactive ash" (in

the form of a bagful of flour, which was dumped on them). They retreated into the shelter to "decontaminate" themselves.

Otherwise, the trial continued normally.

A two-way, closed-circuit television system was in operation—primarily to feed the Reservists lectures on fallout shelters during their stay. However, it was also used to observe the Reserve officers as they held discussions, played cards, walked about the shelter or had their meals.

TO INSURE THE SAFETY of the group, a 24-hour monitoring watch was maintained outside the shelter.

A simulated emergency communications system was also available. On one occasion it was used to tell the men there was indication of possible renewed "radioactivity" in the area, which could continue to pin the volunteers inside.

During the experiment, one man got a toothache, but a member of the group who is a medical doctor put in a temporary filling when the officer chose not to leave the shelter for treatment.

There were moments of humor, too, as when someone drew a picture of a howling dog, with the caption "My dog misses me."

One Reservist celebrated his birthday during the test. His colleagues presented him with a "cake" made of modeling clay and decorated with carbon from matches and match sticks.

On Friday the men were released



from the shelter—approximately 96 hours after they entered it. RADM L. D. Coates, USN, Chief of Naval Research, was on hand to greet the Reservists and present them with special certificates of merit.

THE FALLOUT SHELTER TRIAL was a joint project of the Naval Medical Research Institute and the Office of Naval Research as part of a program to gain knowledge of the psychological response and physiological stresses on men of various ages and backgrounds unexpectedly thrown together in a shelter for an unknown period of time.

The Reservists had come from various parts of the country to attend a life sciences seminar focusing on fallout shelter problems. They routinely applied to attend the seminar because of their interest in the life science areas. A number of the officers, who range in age from 29 to 57, are college professors; others are scientists and engineers employed by industry and government; two are physicians. Thus the planners of the fallout shelter experiment were assured that the subjects would be a random selection and generally strangers to each other, as would likely occur in a real emergency caused by a nuclear bomb.

Two members of the group, aware of the experiment, collected medical and psychological data to verify findings from previous shelter tests. A research report on these factors will be prepared. In addition, a guide on shelters is expected to result as a joint product of the group. All Reservists were given notebooks to jot down their experiences from the viewpoint of their specialized fields.

LET'S TAKE A LOOK at the organization that sponsored this unique type of active duty for training.

The Naval Reserve's research program was started 15 years ago, when the Navy foresaw a growing need for scientific and technical personnel in any future mobilization. At that time, there was no provision to assure the utilization of these men in research activities. Further, the newly organized Office of Naval Research would face a major problem in mobilizing research personnel to satisfy its needs.

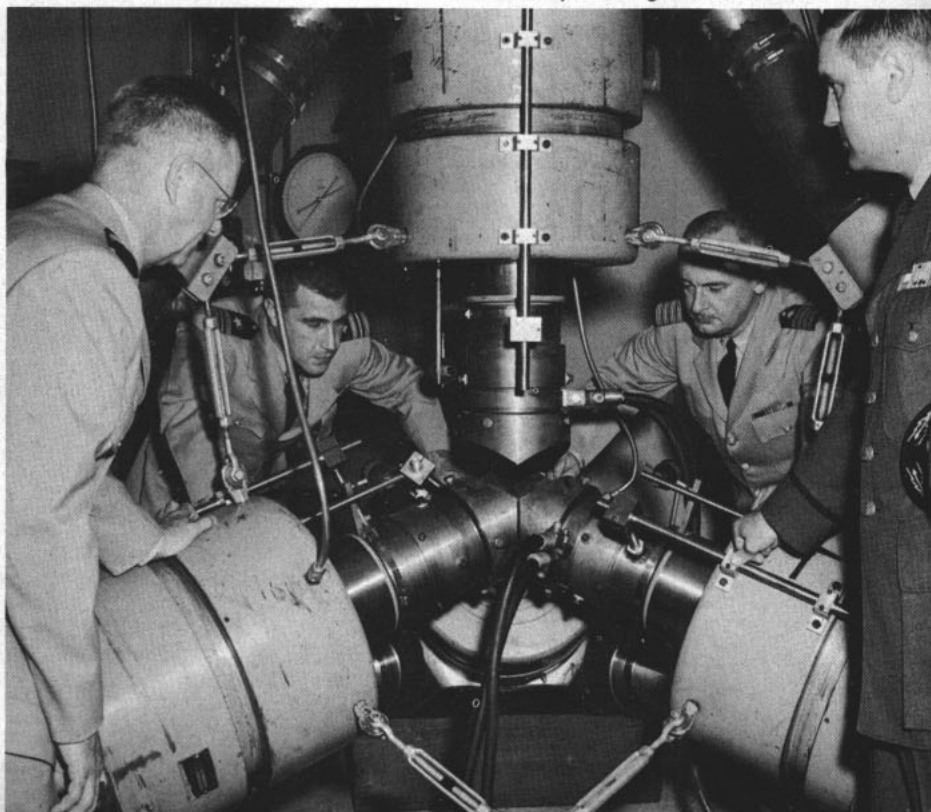
Accordingly, in May 1948, the Research Reserve Program was authorized "To have a pool of scien-

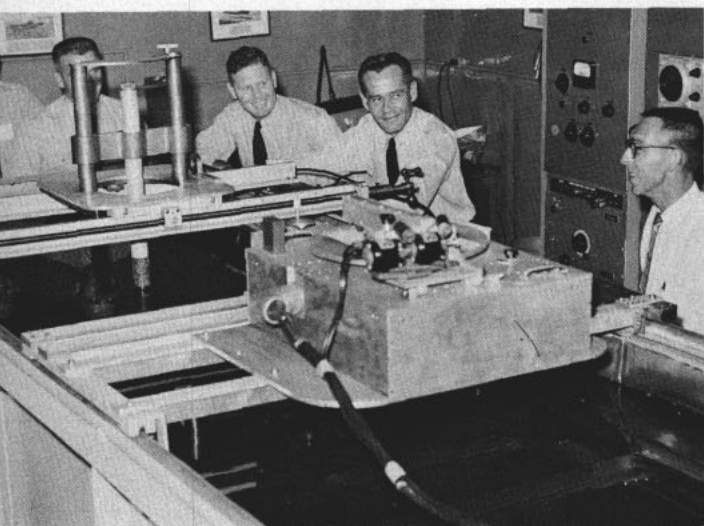
tifically trained officers available to the Office of Naval Research in case of general mobilization."

The first Navy Science Seminar, held in June 1948, was attended by 100 Naval Reserve officers who were carefully screened from more than 700 applicants. Officers were selected from many locations in the U. S., from many fields of science and engineering, and from ranks ranging from ensign to captain.

From this nucleus of research scientists came the first requests for activation of units. The first unit, Volunteer Research Unit W-1, Washington, D. C., held its initial meeting on 14 July. Two units were added

ON TOUR — Naval Research Reservists inspect press used to make synthetic diamonds at an Air Force research laboratory during ONR seminar.





NR's VISIT underwater sound lab. Rt.: Reservists LCDR Rechnitzer and CDR Ross compare their explorations.

on the West Coast early the following month. And the program began to grow.

BY THE END of July 1949, 58 units had been activated. When the Korean conflict broke out in 1950, there were about 90 units with 3300 members. During this emergency, the Research Reserve Program was called upon to nominate officers to fill technical and scientific billets not only by ONR, but also by BuAer, BuShips, BuOrd, AFSWP, AEC and other activities. As a result of the experience gained in furnishing these officers, the primary mission of the Program was expanded in 1953 to include the entire naval establishment.

Following the Korean conflict, the program entered a brief decline and then began to expand again. Today there are 116 companies with a membership of more than 2500 Reservists.

In building up its strength, the

Research Reserve has emphasized quality as well as quantity. Membership is limited to Reservists who are capable of conducting, supervising, coordinating, administering, supplying, analyzing and evaluating research for the Navy; those who are versed in contract administration and patent law; and those who are specialists in training devices.

Most of the sciences are represented, including physiology, medicine, psychology, acoustics, nucleonics, geography, electronics, physics, mathematics, metallurgy and chemistry. Many of the Reservists are engaged in research work in governmental or industrial laboratories; others are qualified doctors, lawyers, educators, technicians, engineers and training devices specialists, to mention a few.

IT GOES WITHOUT SAYING that the membership is well educated. Some 95 per cent have bachelor's de-

grees and more than half have master's or doctor's degrees. About a half dozen have two doctoral degrees. Most of the remaining five per cent without degrees have had some college training.

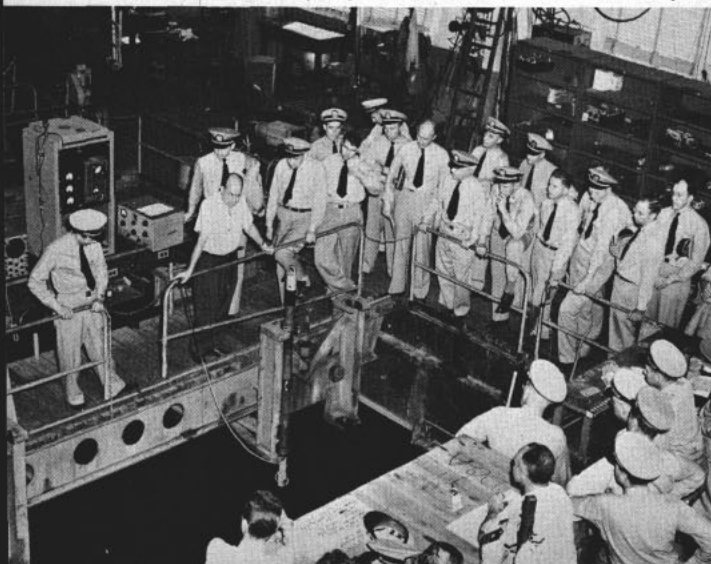
The officer structure ranges from captains to ensigns. The majority are, of course, junior officers.

Although the program is chiefly aimed at officers, enlisted Reservists who are students in professional or technical areas and who are considered potential officer material may be assigned to Research companies.

One of the reasons the Research Reserve attracts such highly qualified members is its individualized training program. It is up to each member to plan his Reserve career by taking part in training which will enhance his mobilization potential.

Members are recognized as specialists in their fields, and no attempt is made to train them in their particular fields. The training, therefore,

RESEARCHERS keep up with the latest. Here, they view reactor and inspect NASA capsule during seminars.



is designed to keep Reservists up to date on the research program of ONR, with lots of opportunities for actual participation.

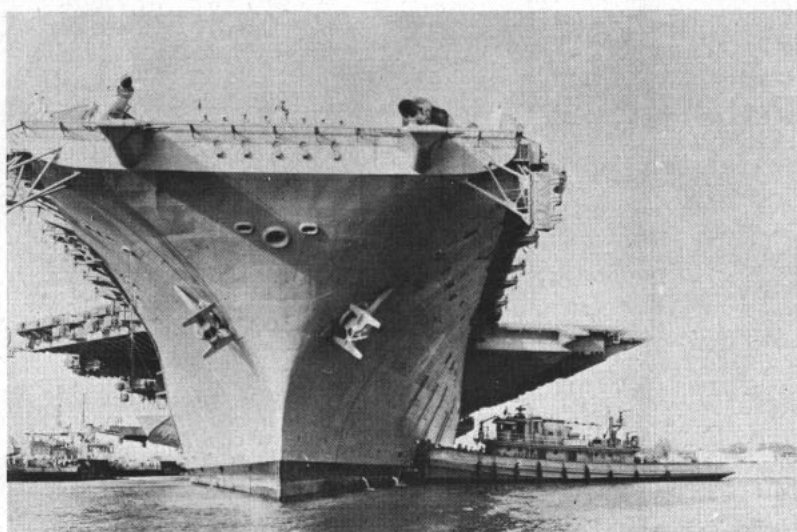
A Research Reservist attends scheduled drill meetings of his company. There are at least 24 drills a year, but a company may elect to hold as many as 36 or 48 drills.

AT A COMPANY DRILL meeting, a Reservist may expect to take part in a discussion of Naval or scientific subjects, usually introduced by an authority in that field. Or, perhaps, he may take a trip to a field laboratory. At another time, he may assist a company scientific or technical study which is tied in with ONR's program, and may devote drill time to a study, review and report of such findings.

Some of the drill meetings are devoted to coverage of the Research Reserve curriculum, which provides members with a common background of knowledge of ONR and its relationship to governmental and industrial scientific agencies. In any of these drill meetings, the local companies—following established guidelines—enjoy considerable freedom in the development of their own training programs, making use of the particular scientific or technical skills of the membership.

You've already learned about one type of ACDUTRA provided for Research Reservists. There are many others. Members keep up to date in current research by attendance at seminars sponsored by ONR. These seminars cover such subjects as nuclear sciences, research methods, medical sciences, ONR laboratories and the like. They are held at ONR headquarters in Washington and at ONR branch offices. They also take place at universities and at Navy activities such as the Medical Research Laboratory at New London, Conn., and the Training Device Center, Sands Point, N. Y. Nearly 50 Navy-sponsored research and development activities offer ACDUTRA to Research Reservists.

The Naval Reserve's Research Program has come a long way toward fulfilling its twofold objective—that of increasing the Reservist's readiness by helping him prepare for his mobilization assignment and of providing the Reservist with opportunities for peacetime participation in ONR's top research program.



PEARL PUSHER—Navy tug eases USS *Constellation* (CVA 64) to pier.

Craftmasters of the Navy

Ships have changed radically since the United States Navy came into existence, but one thing has remained the same. When the big ones try to get alongside a pier, they need help.

Help once was self-administered, according to a sea story, by an impatient sailing skipper who ordered a broadside fired by the starboard guns, the impact of which forced his vessel into its berth.

These days, help comes more efficiently from harbor tugs. Rev-eille aboard a tug is often long before the crack of dawn—a tug boat frequently goes to work before 0400. Before she knocks off, a tug might be called to nudge any large vessel to the pier or into the open.

Against a cruiser, a tug doesn't look so small, but against a ship like USS *Constellation* (CVA 64) she seems pretty inconspicuous.

Nevertheless, the big carrier is completely dependent upon the four tugs which are called upon to nose her against a pier—as at Pearl Harbor, for example.

The craftmasters on board the tugs take their orders from the harbor pilot on *Constellation's* bridge as the big ship comes into the harbor. At Pearl it may take about two hours to maneuver a carrier into her berth.

The orders are transmitted by radio, since it is next to impossible for the craftmasters actually to see the pilot at his post.

The first order is usually to come alongside and make fast. Lines are thrown to the tugs and the crews make them fast.

When the tug's nose comes in contact with *Constellation's* hull, it does so with a healthy thud, but the impact is absorbed by the padding on the tug's bow.

Finally, after a considerable amount of adroit pushing and pulling, the order, "All stop," is given. The tugs cut their engines simultaneously, but don't break away until *Constellation* is securely tied to the dock and the Union Jack is raised at her bow.

There are more than 80 yard tugs in the Pacific Fleet alone. They come in three sizes—big, medium and small. For heavy work, a YTB (large harbor tug) is called upon. For jobs not quite so heavy, a YTM (medium harbor tug) is used and for little jobs the YTL (light harbor tug) is brought in to work.

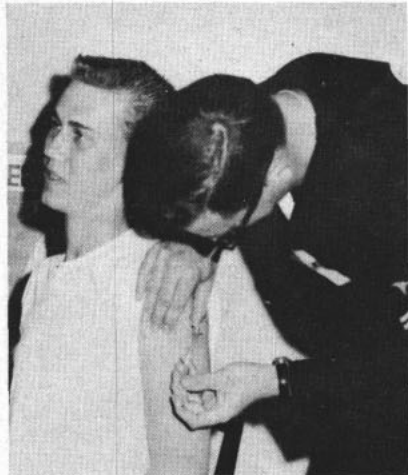
Tug crews vary, but a YTB will frequently carry a crew of eight, including the craftmaster who, under ordinary circumstances, is a chief.

Tugs are traditionally named for Indian chiefs, but are more often referred to by their hull numbers.

Regardless of whether they are known by their names or their numbers, almost everyone agrees they are well nigh indispensable—for the days when a skipper could jet propel his vessel against a pier by firing a broadside are long gone.



STUDENT is taught art of filling prescriptions. (Below) An HMSA gets to administer inoculations.



INSTRUCTOR shows future HM how to don his sterile rubber gloves.



HM SCHOOL student takes blood pressure while his instructor looks on.



Corpsmen's College

ON A CARRIER in the Pacific, an arresting cable snaps and whips across the flight deck, critically injuring two men. On a destroyer in the Atlantic, a raging fire traps a dozen members of the crew. Before they can be rescued they are the victims of serious burns. At a construction project on a tropical island in the Pacific, a Seabee is knocked from his scaffold and falls to the ground.

All of these patients have something in common—they are alive today, thanks to the quick and precise action of a Navy Hospital Corpsman.

The story is repeated every day on Navy ships, and at every hospital. Where did the corpsman learn his job? Where did he develop his skills?

For many thousands the story began at Hospital Corps "A" School, San Diego, Calif. Here, for 16 weeks, through 640 hours of concentrated study and practice, young men—all volunteers for medical duty—are thoroughly schooled in the fundamentals of seven essential subjects. The same kind of training is provided by the HM School at Great Lakes, Ill.

From *Anatomy and Physiology*, they learn the parts and functions of the human body.

First Aid and Minor Surgery classes and vitalized demonstrations equip students with the essential know-how they need for fast, life-saving action.

Principles and Techniques of Patient Care develops the skills a corpsman must have to aid the recovering sick or injured. Here, as in First Aid and Minor Surgery, the student discovers the means by which he can

combine in a single action his compassion for his sick or injured shipmates and his skills as a corpsman.

Metrology and Materia Medica provide him with a basic knowledge of the kinds and amounts of medicine he will use to stop pain and help aid recovery.

At HCS, San Diego, an "A" School class is graduated each week. Most of these new hospital corpsmen are assigned to duty at hospitals or with our Marines.

Some are enrolled in technical schools where they become Operating Room or Neuropsychiatric Technicians, or specialists in Pharmacy, Cardiopulmonary or Physical Therapy. A few are assigned to medical departments in ships or overseas.

Wherever they go, they are better equipped to perform their duties and uphold the high standards of the the Navy Medical Department. Their knowledge will increase as will their skill.

With this knowledge, the corpsman becomes an invaluable assistant to the doctor, ready and able to carry out his orders for medication and treatment. Finally, the student receives special instruction in the fields of *Hygiene and Sanitation* and *Defenses against Atomic, Biological and Chemical Warfare* agents.

The subject matter is important, for from it the corpsman learns terms, definitions, methods, systems and theory. Equally important to him, however, are his instructors. This dedicated group of nurses and senior hospital corpsmen—whose combined experience amounts to hundreds of years—exemplifies all the values of a career which is based on helping others—day and night.

LETTERS TO THE EDITOR

When Leaving the Ship

SIR: My buddy and I are trying to settle a debate about the procedure for leaving a ship. While saluting the OOD, does an individual say "I have permission to leave the ship," or "I request permission to leave. . . ." The 16th edition of the *Bluejacket's Manual* states "I request permission to leave. . . ." but one side of our local argument feels this has been changed recently. Please settle this for us.—E. R. M., AMH2, USN

• Most arguments can be settled by examining the definitions involved, and making sure that each side is applying the same definition to key words in the statement before arguing over the conclusion. You say in your statement "a ship" and "an individual," and these both must be defined before your debate can be settled. The correct procedure when leaving a ship depends upon the status of the individual—whether commissioned or enlisted—and whether he is leaving his own or another ship.

An officer obtains prior permission to leave the ship from his immediate superior (division officer, department head, executive officer or captain, as appropriate) and thus states to the OOD: "Sir, I have permission to leave the ship."

Enlisted personnel obtain permission from the OOD, thus they should say to the OOD: "I request permission to leave the ship, sir."

In the case of departures from a ship which one has visited, each person should state to the OOD: "Sir, with your permission, I will leave the ship."—Ed.

Uniform Name Tags

SIR: I've noticed that name tags worn on the Navy uniform are becoming quite common. However, nowhere in U. S. Navy Uniform Regulations, or other official directives I've checked, does it spell out exactly how they should be worn.

Article 1158 of Uniform Regs notes that "Name tags may be worn, at the discretion of commanding officers, on such occasions as conferences, seminars, and other similar gatherings, or in the performance of duties where some method of identification by name is desirable or beneficial in furtherance of the mission of the command."

Several stations I know of require that when name tags are authorized they should be displayed on the left breast above the pocket of the uniform

This section is open to unofficial communications from within the naval service on matters of general interest. However, it is not intended to conflict in any way with Navy Regulations regarding the forwarding of official mail through channels, nor is it to substitute for the policy of obtaining information from local commands in all possible instances. Do not send postage or return envelopes. Sign full name and address. Address letter to Editor, ALL HANDS, Room 1809, Bureau of Naval Personnel, Navy Dept., Washington 25, D.C.

jumper or shirt. My present station has just received tags, and requires they be worn on the right breast above the pocket.

Seems to me the tags should be displayed in the same manner by all who are authorized to wear them. I have uniformity in mind.—J.M.S., YN2, USN.

• You are apparently in agreement with the Permanent Naval Uniform Board, which last October recommended that "Uniform Regs" (Art. 1158) be revised to include the following:

"Name tags shall be worn on the right breast in a position corresponding to that of ribbons on the left, but shall not be worn on any uniform when medals are prescribed. They shall be worn below the Command at Sea (or any other) insignia worn on the right breast."

The Board also recommended the tags be displayed only while the wearer is actually attending the conference, seminar, or other similar gatherings already indicated in "Uniform Regs," and gave

Expeditionary Medal

SIR: I have heard that a campaign ribbon has been authorized for the Lebanese action of 1958. After making local inquiries, I have been unable to obtain any official information as to whether or not there is such a ribbon. Can you give me the word?—P.M., AQ1, USNR.

• An Armed Forces Expeditionary Medal has been authorized for those who took part in certain military actions after 1 Jul 1958. SecNav Inst. 1650.19 lists the operations that meet the requirements for the medal and gives the criteria for individual eligibility.

The U. S. military operations in Lebanon from 1 Jul 1958 to 1 Nov 1958 are included in the list. However, until a list of eligible ships and units is published, it will not be possible to determine individual eligibility. Further instructions are to be issued when the lists are published and the medal is ready for distribution.—Ed.

a verbal sketch of how the tags should look. Regulation tags are three-quarter by three inches (longer in case of lengthy names), of a non-lustrous, jet-black background, with white block-type lettering one-quarter inch high, spelling the last name only. They may be made of bakelite or any similar material which will hold the non-lustrous finish, and should have clutch-type fasteners.

The Secretary of the Navy has approved these recommendations. At last report the change to "Uniform Regs" was at the printers.—Ed.

Severance Pay for TARs

SIR: I have several questions concerning severance pay for TAR personnel, the answers to which I have not been able to find locally.

Has there been any legislation passed, or have any instructions been issued, which state that an officer or enlisted man in the TAR program who is released before he completes his contract would be entitled to severance pay in an amount, for example, equal to one month's base pay for each year of active duty?

Do certain TAR officers on active duty have five-year contracts, while others have no contracts?

What happens to a Reserve LCDR after he completes 20 years' commissioned federal service, 16 years of which are active duty? Would he be continued on active duty? If not, would he receive severance pay? Or would he receive only a travel allowance to his home of record?—J. S., YNC, USNR.

• The word on severance pay, or lump sum readjustment payments, for members of Reserve components who are involuntarily released from active duty, is contained in the Armed Forces Act of 1952, an appropriate section of which—Section 265—has been amended by Public Law 87-509.

Briefly, a Reservist, officer or enlisted, who is involuntarily released after having completed at least five years of continuous active duty is entitled to a lump sum readjustment payment computed on the basis of two months' basic pay for each year of active service (exclusive of war or national emergency service).

But, if the Reservist is released because his performance fell below standards, the readjustment pay would be computed on the basis of one-half of one month's pay.

Maximum payments may not exceed a total of more than two years' basic

pay, or \$15,000, whichever is less.

Some TAR officers serve without contracts. Contracts are not issued for service beyond 20 years' active duty, or to officers who have already completed 18 or more years of active duty. And, contracts are not afforded to officers in a "failed of selection" category, or for the purpose of extending service beyond the end of a fiscal year in which an officer could fail selection for a second time.

The maximum active duty contract for TAR officers is five years.

Assuming your Reserve LCDR with 20 years' commissioned service and 16 years of active duty has twice failed selection, he would normally be required to return to inactive duty in accordance with Section 6389 of Title 10, U. S. Code. This was amended in 1960 to permit the retention of such officers for a maximum of five years.

Now, some active duty Reserve LCDRs are retained on active duty beyond the 20-commissioned-year point, if there is a specific need for their services and their performance is good. Officers not retained under these conditions receive both severance pay and travel allowances to their home of record or the place from which they were called to active duty. — Ed.

Steam Driven Subs? Sure!

SIR: The steam turbine driven submarines referred to in the Letters section of the December 1962 ALL HANDS were probably HMS *Swordfish* of 1916, and the 18 K-class boats of 1916-18. The last of these was K-26, which was disposed of in 1931. Full data and some excellent pictures of these British boats appear in *Warships of World War I*, by H. M. LeFleming.—Ernest A. Maier, Babylon, N. Y.

SIR: Regarding the question and answer concerning steam driven submarines in the December 1962 ALL HANDS: During World War I the Royal Navy had a class of very large submarines (K-class, I believe) which were steam driven. For confirmation, may I recommend the book *The British Submarine*, by CDR Frank W. Lipscomb, RN, which was distributed to Navy libraries a few years ago.—LCDR T. A. Curtin, USN, CO, USS *Argonaut* (SS 475).

SIR: The British Navy had at least one submarine that was steam powered. It was capable of 22 knots on the surface, and had twin retractable stacks. It was called a K-boat, and was in service about 1925. I've seen films of it in operation.—James C. Pearson, Jr., Brooklyn, N. Y.

SIR: I cannot let your remarks, in reply to a letter by C. C. B., MMCA, USN, passed in the December ALL



REWARDED — C. D. Warren, EMCS, of USS *Cowell* (DD 547), gets SecNav Commendation for Achievement from RADM W. H. Baumberger.

HANDS, go by without some discussion.

Your correspondent asked if any large steam driven submarines were built during World War I and, if so, what was the class?

You replied, briefly, that you were not notably successful in finding any mention of steam driven subs, after talking to some old-timers, searching the library, etc. You did say that the first USS *Nautilus* (SS 168) had a boiler that provided steam for "hotel services" while surfaced, but was a far cry from being steam propelled.

You concluded that your nuclear powered sub USS *Nautilus* (SSN 571) was the first United States submarine which could be considered steam driven, since she was the first powered both on and below the surface by water-cooled, steam producing reactors.

Come, now. All respect to your poor old, pain-wracked body groping through all those dusty files, but permit me to volunteer the information your shipmate, Chief C. C. B., was probably looking for. My sources are as follows: *Jane's Fighting Ships* (1919-20-21-22); *Warships of World War I*, by H. M. LeFleming; *SubSunk*, by CAPT W. O. Shelford, RN (Ret.).

"Submarines, K-class, 17 ships, numbers K-1 to K-17. All built 1917-18. (K-26, built in 1923, was the 18th.) Length, 338 feet; beam, 26 feet; displacement, 1883 tons (standard surface), 2565 tons (submerged).

"Geared turbine engines, two screws; 24 to 25.9-knot speeds; eight torpedo tubes (four bow, four beam); one or two 4-inch guns and one 3-inch AA gun (armament varied in different K-boats); ship's company, 50-60 men."

These subs had two funnels which were made watertight when diving.

I hope this will help clear up any confusion that may have been generated. If I can help Chief C. C. B. any further, I would welcome his letter.—Louis I. Ryan, P.O. Box 3577, Auckland, New Zealand.

SIR: On page 27 of ALL HANDS for December 1962, there is a letter, enquiring about steam propelled submarines. Doubtless you are right in stating that there had never been one in the U. S. Fleet before the atom went to sea, but there are, you know, other Fleets.

If you will refer to *Jane's Fighting Ships*, 1919 edition, page 121, under "British Navy—Submarines," you will find the K-class, 13 extant, four sunk, and six abuilding.

The notes begin with "These are not the first steam driven boats in the British Navy, having been preceded by *Swordfish* (S-1), now scrapped."

The particulars of the Ks, as given by *Jane's*, are: "All double-hulled type, designed by Admiralty for service as Fleet Submarines with Grand Fleet. Dimensions: 337 feet (over-all) x 26½ x 16 feet. Guns: one 4-inch, one 3-inch AA, and (in some) one depth charge thrower. Torpedo tubes: eight 18-inch.

"Surface machinery consists of combined steam turbines and diesel engine. Two sets of single reduction turbines, one H.P. and one L.P. in each set, with double helical gearing. Two screws. Two Yarrow small-tube type boilers with forced draught, boilers, turbines, funnels being lagged with incombustible non-conducting materials.

"Small electric motors are fitted for lowering funnels and closing watertight hatches over funnel wells. Boiler-room air vents closed by hydraulic power. To assist in diving quickly, or getting away after breaking surface (while steam motors are being started up), an 800 BHP eight-cylinder diesel motor is fitted, which can also be used for surface cruising. . . ."

It seems that while *Swordfish* was a failure as a submarine, she was too good a ship to be wasted in wartime, so she was converted into a non-submersible antisubmarine vessel for the duration.

I enclose two tear sheets from the *Crowsnest*, the Canadian Navy's counterpart of your ALL HANDS. You will observe that the sketch of K-26 shows three guns, but it seems that the armament changed from time to time.

The odd raised bow was added to correct what *Jane's* called a "tendency to trim by the head and dive on their own" when running on the surface.—Philip Chaplin, LT, RCNR.

SIR: The enclosed clipping from the *London Sunday Times* contains some information on the British K-boats, a class that was evidently made up of the steam driven submarines that did, or

did not, as the case may be, exist during World War I. You will note that a book on these ships (*The K Boats*, by Don Everitt) was to have been published shortly after the *Times* item appeared (on 13 Jan 1963).—CDR C. H. Blair, USN, Office of Naval Research, London Branch.

SIR: Your December issue carried a letter to the editor requesting the names of books which mentioned World War I submarines which were steam driven.

I consulted my library on the subject and, in a volume entitled *Submarines* by Herbert S. Zim, found a mention of such a sub on page 48, to wit: "During the war several new forms of submarines were developed, including a British attempt—a large steam-driven submarine."

In *The British Submarine*, CDR Lipscomb, O. B. E., RN refers in Appendix IV to a *Swordfish* class submarine completed in 1916, 231 feet long, submerged displacement 1384 tons, powered by Laurenti steam turbines.

Also mentioned is a K-class submarine completed in 1917, 340 feet long with a submerged displacement of 2450 tons, powered by Parsons and Brown Custis steam turbines.

The German "Walter" boat which used a high grade hydrogen peroxide was developed to use the resulting steam in turbines when the peroxide was in the cycle.

Undoubtedly your reader can do further research and uncover further facts on steam driven subs.—Philip E. Cockidge, Tucson, Arizona.

• Letters like these make "research" easy. After checking the references you suggested, we concede that there were, indeed, steam driven submarines built during World War I. In the December *ALL HANDS* we implied that USS *Nautilus* (SSN 571) was the first submarine in the United States Navy which could be said to be steam driven. We avoided committing ourselves to a flat statement that there never were—anywhere—steam driven subs prior to *Nautilus*, mainly because we weren't sure. Now we are, thanks.

In addition to what Canadian Navyman Chaplin, New Zealander Ryan, and others, have said about the K-boats, we've come up with some information that may be of interest to anyone who has followed the series thus far, including an account of the accidental sinking of the K-13, which caused some anxious moments back in 1917.

The K-class subs, CAPT Shelford notes in *SubSunk*, were the result of a freak development in the First World War. It was thought that "fast submarines could act as scouts for the Battle Fleet, steaming at high speed on the flanks of the advance screen, and supposedly able to dive to attack the enemy fleet as soon as it was spotted."



PLANE ANCHORS — Sandbags on wings and road graders hold Air Force C-123 cargo plane in place during high winds at NAS, Kodiak, Alaska.

Thus, the speedy K-boats, fitted with a destroyer's set of steam turbines instead of diesels. Immediately behind the conning tower they had two collapsible funnels and large ventilators to provide air for the furnaces. These, of course, had to be shut down when the subs submerged.

As it turned out, however, the rapidly developing aircraft forced the subs to dive, robbing them of their value as scouting ships ahead of the fleet.

There were 18 such steam driven K-boats. Ks 1 through 17 were built and completed during the years 1916, 1917, and 1918. Six more "improved" K-class subs were ordered, but, after the war, only one (K-26) was completed.

The London Sunday Times item sent along by CDR Blair gives a detailed, hour-by-hour account of what happened in and over the K-13 in January 1917 when she sank during her acceptance trials with 80 men on board. Similar data is contained in Shelford's *SubSunk*.

On 29 Jan 1917 the K-13 was conducting her diving trials a few miles from the Glasgow shipyards when, by accident, her boiler-room ventilators were left open as she went down for the day's final dive. All her after compartments were flooded, and she settled on the bottom in 60 feet of water with 49 of the 80 men on board trapped in the forepart of the boat. The other 31 men were killed.

LCDR Godfrey Herbert, the boat's commanding officer, ordered his trapped men to rest as quietly as possible in an effort to conserve air. He anticipated rescue without much delay, but was wrong.

After nearly 24 hours, CDR Herbert and CDR Francis Goodhart, CO of K-14, who was a visitor for the acceptance trials, decided they must attempt to get in touch with their rescuers and ac-

quaint them with the situation on board. (During the night they had been relieved to hear the sound of sweep wires dragging overhead, and knew they had been located.)

The two men planned to shut themselves in the conning tower, and admit sea water and compressed air until they had built up enough pressure inside to enable them to open the hatch. CDR Goodhart volunteered to carry the message (written instructions enclosed in a tin container), while CDR Herbert was to stay behind and shut the hatch after he had gone.

The K-class subs had a built-in bridge with windows and a roof over the top of the conning tower which formed an obstruction. Goodhart's escape attempt failed when he struck his head on the bridge shelter and was killed. CDR Herbert then followed him out—not intentionally—when he was carried up by the outrush of air.

After contacting the rescuers, Herbert suggested they secure a four-inch pipe into the gun ammunition hoist down which emergency rations and air were passed to the men still trapped. The danger of suffocation was thus eased, and the salvagers had time to attach air hoses to the ballast tanks and lighten the sub forward until they were able to lift her bow to the surface.

While the bow was cradled between two lifting barges, the salvage men swarmed on the sub with oxyacetylene cutting equipment and cleared away the outer casing and cut through the superstructure to reach the pressure hull below.

Fifty-four hours after the sub was first sunk, they succeeded in making a hole large enough for a man to climb through. One by one the exhausted survivors were helped out into the fresh air, effecting a happy ending.—Ed.



DD TO THE RESCUE — During 1962 USS Manley (DD 940) pulled downed pilots from Atlantic on three occasions, and rescued crew off yacht.

No Khaki Work Uniform

SIR: I have read in both official and unofficial service publications, of a current change in the armed forces working uniform. None of the articles specifically stated that the Navy would be changing, but a couple of stories did say that the Army, Air Force, and Marines would wear a similar khaki uniform.

Is the Navy making this change, and if so, when does it officially go into effect?—B. T. S., SK3, USN

• *Certain working khaki uniform articles, including trousers, shirts, and socks, have been standardized among the services that wear khaki. Since the Navy enlisted man below the rate of chief petty officer does not wear khaki, there has been no change in his working uniforms. As of the moment, no such changes are being planned.*—Ed.

No Lanyard on Liberty

SIR: According to *Uniform Regulations*, a lanyard may be worn as an optional article. Does this mean a lanyard may be worn with the liberty uniform, while the wearer is in a liberty status?—R. J. B., CT3, USN

• *No. Navymen on liberty should not wear the lanyard. "Uniform Regulations" (Art. 0724.4) notes that lanyards may be worn only by personnel on duty.*—Ed.

Hot for Firefighting

SIR: Does the Navy intend to have a rating called Firefighter? I attended firefighting school at Treasure Island, Calif., and heard some scuttlebutt concerning the establishment of such a rating.

If a Firefighting rating is in the works, how would I get into it? If the

Navy does not intend to establish such a rating, why do so many men attend the firefighting school? — L. A., EMFN, USN.

• *There are no plans at present to establish a general rating of Firefighter. (There is, however, an emergency rating of Firefighter, which is activated only during wartime.)*

The Firefighting course you completed at Treasure Island is designed to help the peacetime Navyman conquer any fears of fire he may have, and to teach various techniques for extinguishing flames. The Navy would like every man to have the benefit of extensive firefighting training, since fighting fire at sea is the responsibility of every man on board ship. As yet, personnel planners haven't figured out a way to send all hands to firefighting school and keep the Navy in business in other areas. —Ed.

Surfbird Crew Was Versatile

SIR: I thought the article on USS *Surfbird* (ADG 383) which appeared in the March issue of *ALL HANDS* gave an excellent account of a fine ship.

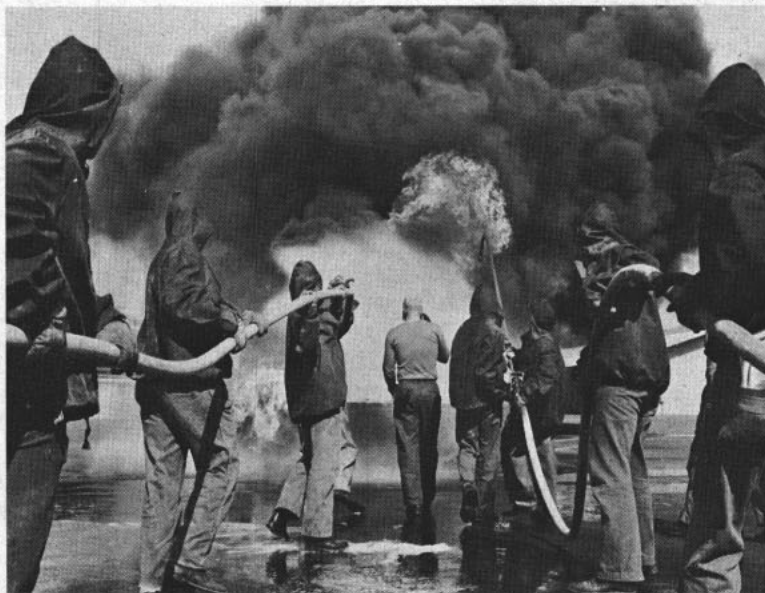
I have some additional information on how *Surfbird* became a degaussing ship in which I believe you may be interested.

In 1956, CDR (then LCDR) George Mitchell, USN, was the commanding officer of USS *Ampere* (ADG 11). He knew that *Surfbird*, then an MSF, was due for decommissioning and proposed that *Surfbird* replace *Ampere*.

He further advocated that the conversion work be done using the ship's force and repair personnel while still deployed in WestPac.

To cap it all off, he proposed that the crew of *Ampere* operate *Surfbird* which is a much larger ship.

NAVY FIREFIGHTING students move in on open tank fire. Rt: Student gets feel of oxygen breathing apparatus (OBA).



The conversion was made much as CDR Mitchell had suggested, and the result was a ship with a much improved degaussing and deperring capability.

So far as I know, *Surfbird's* was the only conversion which the commanding officer originated and on which all design and planning work was done by him and the ship's force.

Further, it is the only conversion, to my knowledge, in which all work incident to the initial conversion was done by forces afloat.—D. G. PHILLIPS, CAPT, USN, Board of Inspection and Survey.

• *Thank you, sir, for the interesting account of Surfbird's conversion and CDR Mitchell's part in it. He and the officers and men of Surfbird and Ampere well deserve your comments for their tremendous job.*—ED.

Grading Advancement Exams

SIR: The question has arisen among several of my shipmates and myself as to how the advancement in rating tests are graded. Any help you could give in answering the below questions would be appreciated:

1. Is there a definite test score that is considered to be passing or are tests graded on a curve?

2. How is your multiple computed?

3. What part does your multiple then play in the computation of the final score?—R. E. S., DKSAN, USN

• *Advancement in rating exams are graded at the Naval Examining Center by electronic computers. Because exams are marked on a zero to 80 curve, it may sometimes be possible to attain the maximum score of 80 without having answered all 150 questions correctly, but all questions are utilized in grading the exam. And there is a passing/failing cut-off score.*

Exam scores are then combined with other factors which establish your qualifications for, and credits toward, advancement. These factors have been converted to numerical credits which, along with the test score, form your final multiple.

Factors which comprise the final multiple, and the maximum credit which can be obtained for each, are: examination score, 80; performance factor, 50; total active service, 20; service in pay grade, 20; awards, 10; making a maximum final multiple of 180.

Personnel are advanced to pay grades E-4 through E-7 to fill Navy-wide vacancies in total allowance for each rating on the basis of final multiple standing.—ED.

Oceanographic Ship Marking

SIR: Several times ALL HANDS magazine has mentioned the new AGORs and ACs which are being built or have been built specifically for oceanographic research.

These ships are particularly interesting to those of us now serving in the



GENUINE HARD HATS, loaned by a local manufacturer, are presented to new CPOs during advancement ceremony held at NATTC, Brunswick, Ga.

older research vessels which were converted from other types. It is well known that these new ships will be manned by civilian crews under MSTs.

I recently saw a picture of USNS *Gilliss* (AGOR 4) which showed *Gilliss* with the typical blue and gold stack markings of MSTs ships.

At the same time, she has the large shaded bow letters and numbers of a commissioned naval vessel.

Also, these numbers are repeated on the stern of the vessel in place of her name and appear to be in a darker color than the hull instead of the conventional white.

Is a change in standard ship markings forthcoming or is this scheme in error?

—D. E. A., LTJG, USNR.

• *The markings on Gilliss are not in*

error but, for Navy ships, they are unusual. Their position and color are dictated by a combination of MSTs, American Bureau of Shipping, Coast Guard and Navy requirements.

Navy markings are still those to which you are accustomed—stern numerals should be white with black shading. The ship's name should appear at the stern on the centerline below the main deck.

No change in this type of marking for commissioned naval vessels is anticipated.—ED.

That Ship Was King

SIR: In the March 1963 ALL HANDS you noted the picture on the cover was, for the most part, unidentifiable. You said the picture shows a quartermaster manning the ship's wheel as a bo'sun's mate explains gear to a new man while the ship is cruising through Pacific waters. You commented that the identities of the ship, men pictured and photographer, were unknown.

I believe I can fill in some of the missing information.

The men in the picture were on board USS *King* (DLG 10) when the photographer (whose name doesn't click at the moment) focused in.

The bo'sun (BM1) is M. C. Whitman, who has since retired after 20 years of distinguished service, and now pilots an oceanographic ship in the San Diego area.

The man at *King's* wheel was QM3 Lane. The center man (or "new" man) was Charles Rule, who's now an ET2 and, last I heard, was at an advanced electronics school.

The time was during *King's* shake-down cruise to Hawaii.—R. G. Bowen, LTJG, USN.

• *We try to avoid printing pictures*

Blue Goes With Anything

SIR: Is the new officer's lightweight blue raincoat authorized for wear with the tropical white long uniform? I have seen the khaki uniform raincoat worn with whites—this appears a bit unsightly—and am sure that most officers rule out the combination overcoat/raincoat with tropical white long because it would be too warm and uncomfortable.—C.D.M., LCDR, USN.

• *The new lightweight blue raincoat may be worn with any uniform. Words to this effect will be contained in the next printed change to Uniform Regulations. As Uniform Regs now read (Art. 0126.7.b 5 and 6), the blue raincoat may be worn with any uniform, and the khaki raincoat should be worn only with whites, khakis, or aviation greens.*—ED.

Ship Reunions

News of reunions of ships and organizations will be carried in this column from time to time. In planning a reunion, best results will be obtained by notifying the Editor, **ALL HANDS** Magazine, Room 1809, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., four months in advance.

• **uss Barb (SS 220)**—A reunion for all who served aboard during World War II is scheduled for 2, 3 and 4 August, at Pascagoula, Miss. For details, write to RADM E. B. Fluckey, USN, 1326 Barger Drive, Falls Church, Va.

• **uss Idaho (BB 42)**—The sixth annual reunion will be held in Long Beach, Calif., 19, 20 and 21 July. For information, write to **uss Idaho** Association, P. O. Box 8048, Norfolk, Va.

• **uss Santa Fe (CL 60)**—The 17th annual reunion will be held at the Statler Hilton Hotel, New York, N. Y., on 12 October. For additional details, write to Frederick C. Jaissle, 18 Cedar St., Hudson, Mass.

• **56th Seabees**—The 15th annual reunion will be held at the Chase-Park Plaza Hotel, St. Louis, Mo., on 30-31 August and 1-2 September. For information, write to H. H. Holmberg, 342 N. Oak Crest, Decatur, Ill.

• **84th Seabees**—A reunion will be held at the Hotel Schroeder, Milwaukee, Wis., on 9, 10 and 11 August. For details, write to D. S. Provenzola, 14230 Dixie, Detroit 39, Mich.

• **uss Pinkney (APH 2)**—Those who served on board who are interested in holding a reunion in September may write to LCDR C. M. Erdman, 835 Willow St., Lebanon, Pa.

• **uss Walke (DD 416)**—A reunion is being planned for all who served on board. Interested shipmates may write to Martin A. Holloway, 2178 Ebers St., San Diego 7, Calif.

• **Yangtze River Patrol of China**—Old "River Rats" who served in the Yangtze patrol, who are interested in holding a reunion with time and place to be decided, are invited to write to John J. Anderson, MMC, USNFR, 83 Madison, Chula Vista, Calif.

in **ALL HANDS** that we can't identify.

In this case we made an exception. The picture on the front cover of the March issue gives a close-up of our favorite subject—the Navyman doing his job. It was one of many in a stack sent to us by CINCPACFLT headquarters at Pearl Harbor, Hawaii.

Obviously, the excellent CINCPACFLT PIO staff was as perplexed as we: "This is a nice picture. Wonder where it came from."

Now we know, thanks to an officer who knows his men. — Ed.

That's Right, They're All Wrong

SIR: In the May issue of **ALL HANDS**, I see quite a fuss being raised over the miscaptioning of a photograph which accompanied an article concerning the RE-1 slingshot catapult.

To further the interest of accurate reporting, I must state that it is true the photograph (which appeared in the December 1962 issue) was miscaptioned, but this is not an F-2C (F2H) 2, 3 or 4 **Banshee**. It is a British **Sea Hawk** which was at this test facility for use in testing and evaluation of RE-1.

I hope this eases a few minds. — Felix A. Cittadino, U. S. Naval Air Test Facility, Lakehurst, N. J.

P. S. I wrote the article.

SIR: Regarding the picture accompanying the RE-1 slingshot catapult article in the December 1962 issue of **ALL HANDS**, and the letters on page 47 of the May 1963 issue, everyone is wrong.

The plane is neither an A-4B (AD-2) **Skyhawk** nor an F-2C (F2H) **Banshee**. It's a Royal Navy **Seahawk** on lease to the German Navy, and has German markings. It was being used for tests when this picture was taken at the Naval Air Test Facility. — B. Ross, AMSI, USN.

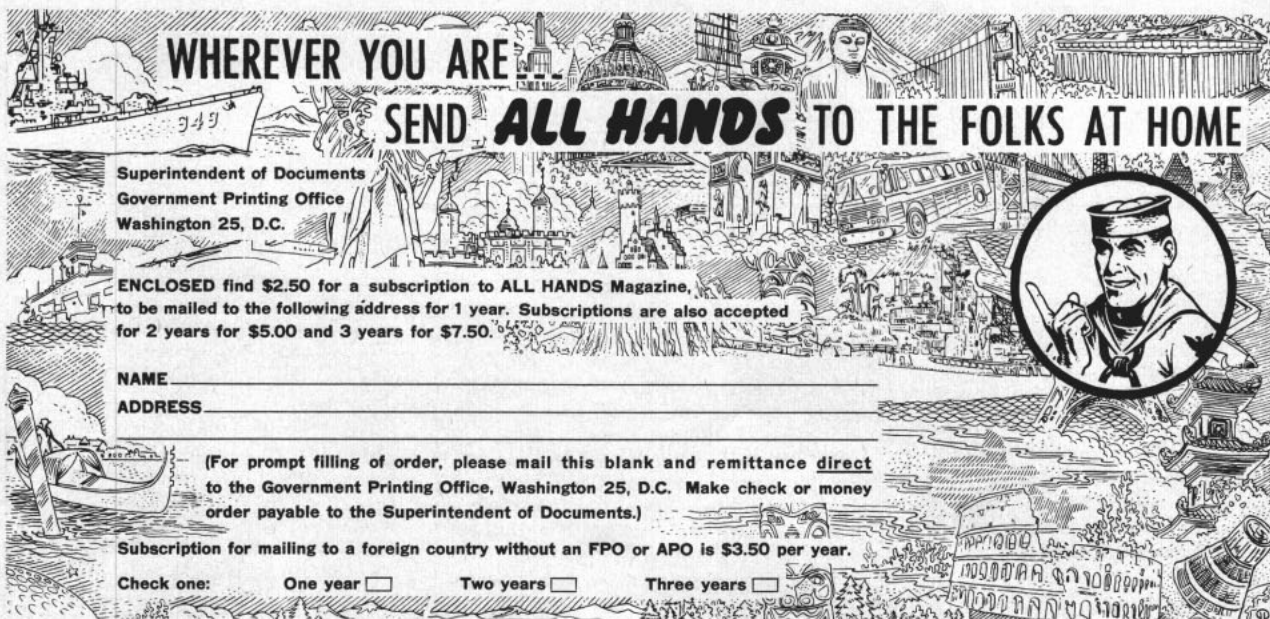
SIR: While reading the December issue of your magazine which had just arrived on board, I came across a photograph of an aircraft being used for trials of your RE-1 catapult.

The caption referred to this aeroplane as an A4D-2 **Skyhawk**. Surely, though, the aircraft that is shown is a British **Sea Hawk**.

I was not aware that there was a **Sea Hawk** flying in the United States. — LT M. L. Soper, RN, HMS **Hermes** (R-12).

• The British-built **Sea Hawk** jet fighter has an over-all design that might, at a distance, appear similar to the U. S. F2C, which accounts for the error.

However, there are many differences between the **Banshee** and the **Sea Hawk**. Two of the more obvious: The **Banshee** has two engines, the **Sea Hawk** one; the **Banshee** is slightly larger, having a wingspan of 41 feet-seven inches, and length of 40 feet-two inches, as compared to the **Sea Hawk's** 39-foot span and length of 39 feet-eight inches. — Ed.



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RADIO ACTIVE — D. Eslinger, RM1, checks students in radioman course.

WestPac Training Group

THE U. S. PACIFIC FLEET Training Command has its headquarters in San Diego, Calif., but its bailiwick spans the Pacific Ocean.

The furthestmost of its 11 training activities is the Fleet Training Group, Western Pacific. It is the prime source for the latest developments in fleet training for U. S. Seventh Fleet ships operating in the Japan-Okinawa area.

This group is one of three such activities within the Pacific Fleet Training Command. The other fleet training groups are located in San Diego, Calif., and Pearl Harbor, Hawaii.

Unlike its sister command in San Diego, which relies on a Fleet Training Center for such chores, the Western Pacific Group manages classrooms ashore. Included in its shore-based schools are classes in fire fighting, radiological defense, gunnery, leadership, navigation, anti-submarine warfare, and visual and radio communications.

Many of the ashore training courses are suspended during refresher training because the instructors also serve as underway observers.

The Group's main job is to conduct at-sea refresher training for the United States' ships deployed in the Far East. Its nine officers and 31 enlisted men also observe, analyze, and critique battle problems for competitive operational readiness inspections.

At sea (or underway) refresher training consists of conducting and evaluating shipboard exercises and drills, using ship's men and equip-

ment. This is the big test of several weeks of instruction ashore, and preparation by the crew to make themselves combat ready.

Owing to the limited number of men available and the other functions it must perform, the Fleet Training Group can adequately handle only one large ship or two smaller ones at one time. This averages about 15 refresher-trained ships per year.

In an effort to increase its shore service to ships, the refresher training of the smaller vessels is overlapped by one or two weeks when most of the ashore courses are available. Another move in this direction is to "pre-package" the ships' refresher training schedule. In this way, certain instructor/observers can be on board the minimum time and can return to conduct their classes ashore.

The Western Pacific Fleet Training Group's association with the Japanese Maritime Self Defense Force (JMSDF) is a vital link in U. S.-Japanese relations. Under the U. S. Military Assistance Program, training aid is provided to Japan's Fleet Training Command, Second Service School, and First Fleet Training Group at Taura, Japan.

Assistance includes the use of its training facilities, interpretation of U. S. training publications, training method guidance and organizational aid. In addition, other groups of JMSDF fleet and staff personnel hear lectures or take part in conferences conducted by the Fleet Training Group. They do a topnotch job.



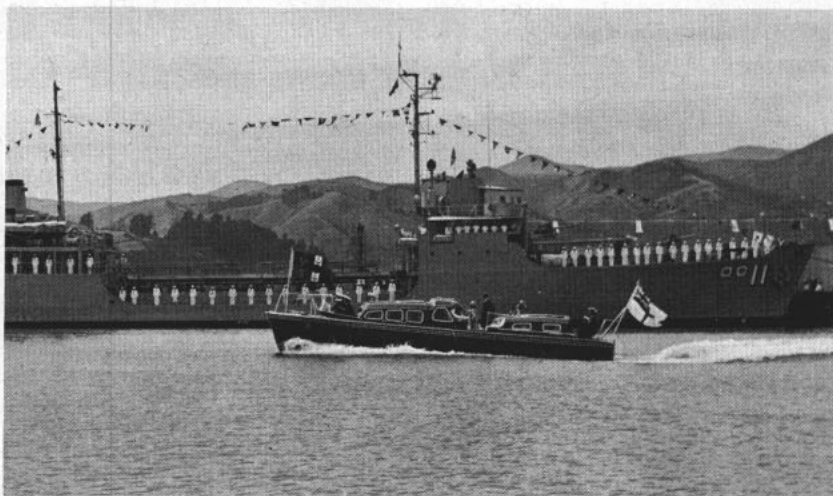
HOT STUFF — A. E. Debourgh, BTC, holds a class for Japanese sailors.



FTG SCHOOL — ASW is taught by LT R. L. Crozier. Below: R. R. Stirling, FTC, teaches gun tracking.



★ ★ ★ ★ TODAY'S NAVY ★ ★ ★ ★



THE RAILS of USS *Tombigbee* (AOG 11) are manned as Queen Elizabeth II and the Duke of Edinburgh arrive at port of Nelson, New Zealand.

Slick Job on Fleet Oilers

Two fleet oilers are scheduled for a conversion that will increase their petroleum-carrying capacity from 100,000 barrels to 150,000 barrels. They are *uss Navasota* (AO 106) and *Waccamaw* (AO 109). Both were authorized for conversion under the fiscal 1963 conversion program.

Besides increasing the amount of transferable fuel the oilers can carry, the conversion involves replacing and renovating pumps and deck gear to increase the rate of transfer, and installation of an auxiliary machinery plant.

Both vessels are of the same type, now having an over-all length of 551 feet, a maximum beam of 75 feet, and a full load displacement of 25,000 tons. After conversion, the ships will be 644 feet long and have a

full load displacement of 34,600 tons. Conversion will take place in Seattle.

Tumbling to Fame

Midshipman First Class Hal Holmes of the NROTC Unit, University of Illinois, who in some quarters is considered to be one of the greatest tumblers in the world, has roused his cheering section again.

Holmes recently won the 1963 NCAA tumbling title with a score of 98.25, the highest ever posted in NCAA competition.

A few of the other titles Holmes has earned to date are: NAAU Champion in 1959, 60, 61 and 62; Big Ten Conference Champion in 1961, 62 and 63; and champ in the 1959 Pan-American Games.

Navy Art Scored Hit In Paris

An exhibit of U. S. Navy and Marine Corps art and historical objects was displayed at the Musee de la Marine in Paris recently.

The exhibit consisted of outstanding works of art from Navy and Marine collections, and paintings and historical artifacts on loan from the National Archives, the Library of Congress, the Naval Academy, and the Smithsonian Institution. In addition, President Kennedy selected two Navy paintings from the walls of the White House for the exhibit—*Bombardment of the Citadel—St. Malo*, and *Beach at Dusk—Iwo Jima*, by LT Mitchell Jamieson, USNR, a watercolor artist.

The chronological development of U. S. naval and marine art was the theme of the display. Paintings contemporary to designated periods were used as much as possible.

The display originated in Washington, D. C., where it was sealed into a 27-foot van by Navy Exhibit Center personnel. Escorted by a Marine guard, the van was moved to the Army Terminal at Brooklyn, N. Y., where it was shipped to France aboard *ss Transglobe*, a chartered ship of the Military Sea Transportation Service.

Lots of MOTs in SubPac

Commander Submarine Force, U. S. Pacific Fleet, supports one of the principles of early American naval leader, Commodore William Bainbridge—namely, that no matter how many good qualities a ship's captain possesses, he won't win a battle unless his gunners hit plenty of MOTs (middle of target).

To impress this upon Pacific Fleet submariners, there is a semiannual competition for excellence in fire control and torpedo performance.

Sailing off with honors for the last six months of 1962 were *uss Grayback* (SSG 574), *Cusk* (SS 348), *Barbel* (SS 580), *Blackfin* (SS 322), *Bugara* (SS 331), *Pomfret* (SS 391), and *Scamp* (SSN 588).

Grayback, *Cusk*, *Barbel*, and *Blackfin* are Pearl Harbor-based subs, while *Bugara*, *Pomfret*, and *Scamp* are based at San Diego.

YESTERDAY'S NAVY



On 1 Jul 1941 the naval coastal frontiers were established: North Atlantic, Southern, Caribbean, Panama, Pacific Southern, Pacific Northern, Hawaiian and Philippine. On 5 Jul 1862 Congress created the Bureaus of Navigation, Equipment and Steam Engineering. On 6 Jul 1862 the James River Flotilla was made an independent division of the North Atlantic Blockading Squadron. On 6 Jul 1944 carrier-based aircraft began their daily bombings of Japanese installations on Guam and Rota, Marianas Islands. On 9 Jul 1943 U. S. destroyers bombarded Solomon Islands.

Weiss Comes to the Rescue

It was Friday, and the crew on board *uss Weiss* (APD 135) were looking forward to week-end liberty in Sasebo, Japan, as they steamed toward port. The high-speed transport was approaching the end of a tour with Amphibious Force, Seventh Fleet, and after a few more port calls in Japan would be heading home to San Diego.

Suddenly there was a flurry in the radio shack. The ship changed course, and word was passed that *Weiss* was heading to answer a distress call.

A Chinese merchant vessel, *Haiziang*, on her maiden voyage from Yokahama, Japan, to Keelung, Taiwan, had foundered when her cargo suddenly shifted. The distressed vessel had been wallowing helplessly in heaving waves for 12 hours before *Weiss* picked up her Mayday signal and reached the scene.

Other merchant ships were circling *Haiziang* when *Weiss* arrived, but they had been unable to render assistance because of the extremely heavy seas. *Haiziang* was listing badly, and some of her passengers and crew members had chanced jumping. Fourteen were picked up by two merchant ships.

Weiss assumed the on-scene command for search and rescue operations and went to the rescue of *Haiziang's* remaining crew.

At considerable risk, a rescue party from *Weiss* was lowered in a landing craft. The LCPL was badly damaged when high swells strained it against its lowering cable, but the rescue operation proceeded.

Racing darkness, the small craft battled its way across great crests to reach *Haiziang*, which had by this time reached a list of 60 degrees



FIREFIGHTER — Men and equipment from *USS Somers* (DD 947) helped bring 12 million-dollar fire under control in Townsville, Australia.

and was still flooding. As the LCPL drew closer, the *Haiziang* crew jumped from their ship's fantail. The rescue party, working strenuously, recovered all 30 who jumped, including the ship's master. Some were slightly injured.

The LCPL again fought its way across the waves and delivered *Haiziang's* survivors to safety on board the APD.

Despite the success of the rescue operation, some of the distressed ship's crew were lost. One crew member was killed when the cargo shifted; another drowned after being swept overboard by a crashing wave. Nine others who had tried to swim to safety never made it.

Weiss made for Keelung, where she was met by an ambulance and a crowd which included many relatives of the 30 survivors who disembarked there.

Back From the Middle East

Navy men in the crew of *uss Forrest Sherman* (DD 931) returned to

Newport this spring from a Middle East good will tour loaded with cruise souvenirs from ports all along the route from Suez to Bombay.

The first place after passing through the Suez Canal was Jidda, Saudi Arabia, a city of between 60 and 70 thousand people located on a sandy coastal plain.

Here, most *Forrest Sherman* men received their first taste of Middle Eastern hospitality at elaborate Arab dinners.

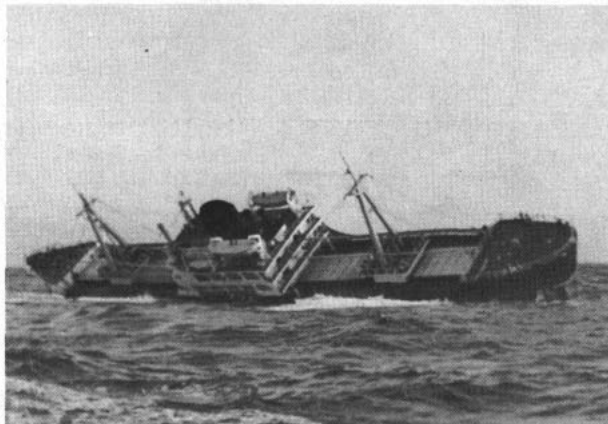
The crewmen will long remember the lavish banquet tables loaded with food fit for a king.

For the duty crew which could not attend the banquet given by a local Sheik, the host sent a gift to the ship — 10 cattle, 50 sheep and 150 chickens.

At Jidda, Aqaba, Jordan; and Port Sudan, Sudan, the local civilian and military population had a close look at destroyer life when about 300 guests were invited on cruises.

Each cruise included general quarters drill, mock fire-fighting, gun

TO THE RESCUE — *USS Weiss* (APD 135) answered a Mayday and led the rescue of a Chinese merchant ship's crew.



firing at surface and air targets, and other seamanship evolutions.

At Port Sudan where many of the guests were members of the Sudanese Navy, several were given the opportunity to handle the ship under the captain's supervision.

In Bombay *Sherman* men, on a good will tour, distributed gifts to St. Anthony's Home for Orphans and the Children's Orthopedic Hospital. Gifts of books were also made to libraries of charitable institutions and to the Indian Naval Headquarters.

Letter from a Mother of a Submariner to SecNav

On 10 Apr 1963, the submarine *USS Thresher* (SSN 593) was lost approximately 225 miles east of Cape Cod with all the crew aboard. Among the members of the crew

was Pervis Robison, SN, USN. Here is a letter sent by the mother of young Robison to the Secretary of the Navy, the Honorable Fred Korth. The letter speaks for itself.

Hon. Fred Korth
The Secretary of the Navy
Washington, D. C.

My dear Mr. Secretary:

Thank you for your very beautiful letter to us. We know from seeing you at New London that your burden too must be a great one.

May I ask you to express our special thanks to a number of your Navy personnel who extended to us uncommon and special courtesies in connection with that Memorial Service. I should like to tell you of the circumstances: Late Saturday afternoon, April 13th, my family, relatives and friends made plans to attend the Service. I expressed the wish to have the closest friend of our boy present with us. However, this friend, an Air Force sergeant, was stationed in Greenland. On the outside chance that some arrangements might be made, I wired the Chief of Naval Personnel to explain the circumstances. I was promptly notified that my request had been granted and that this boy, Staff Sergeant George Clark, would be flown in to nearby McGuire Field, Trenton. He was in my home in Nutley, New Jersey, on Sunday, the following morning—a remarkable and wonderful treat for us.

I was quite ill and my doctor advised against my making the trip to New London, but I was determined to go and relied upon a number of friends to help me on the trip. Our Pervis was loved by all who knew him here and twenty-two persons made the train trip. When there was no public bus transportation available on arriving at the New London railroad station, my friends called the Transportation Officer at the Base and we were quickly furnished with a special bus accommodation for our rather large group. When I grew faint at the long wait in the crowded Base cafeteria, I was taken to the hospital where one of your very fine Navy Nurses, a "silver leaf" on her uniform, took wonderful care of me until the Service began. I have no names, but I shall consider it a special courtesy to me if you will make certain that these kind and understanding people receive my personal thanks.

My husband and I and all of my people take pride in the fact that our boy, as we understand it, was one of the two colored personnel on the *Thresher*. Pervis was our only child and we do say with you that he died "honorably and bravely." We are so very proud of him.

Very sincerely yours,

(signed) Margaret Robison

When the ship moored at Newport recently, it was Christmas all over again for families of Navymen who had been on the cruise. This time the presents included camel saddles, cigarette boxes, handbags, brass trays, silk, ivory and leather poufs.

Deep Water Hydrophones

Special listening equipment is being devised for the Navy Oceanographic Office which will enable its scientists to hear noises made by marine life at depths of more than two miles. The best depth achieved with most conventional hydrophones is a few hundred feet.

The knowledge of natural underwater sounds will help scientists to better identify man-made noises.

The new equipment will also provide a broad frequency range (about 10 octaves) which will pick up sounds in the upper ranges inaudible to the human ear.

The complete system will consist of three hydrophone amplifier units, each accompanied by a transistorized high fidelity pre-amplifier to provide power. The hydrophones will be suspended at various depths.

The unit at the bottom of the cable will also be equipped with a pressure-sensing instrument to indicate its depth.

The sounds picked up by the three hydrophones will be carried by the cable to a research ship, where they will be recorded on magnetic tape.

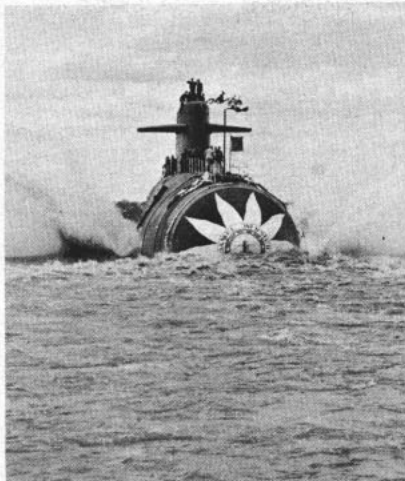
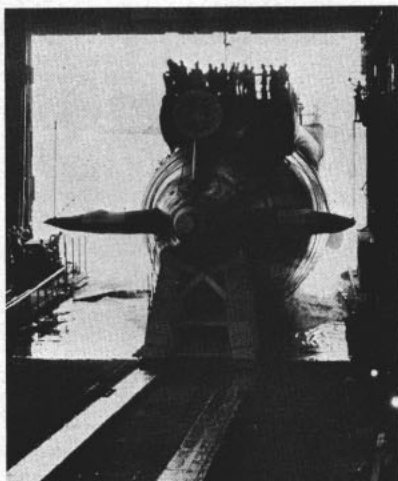
The cable will be supported by a floating spar buoy while the research ship drifts quietly some distance away so shipboard sounds will not interfere with the recording of deep-sea noises.

Made to Order for Polaris Subs

A second submarine tender especially constructed to support fleet ballistic missile subs has been launched at Pascagoula, Miss., and is scheduled to be commissioned later this year.

The new ship is *Holland* (AS 32), a sister of *uss Hunley* (AS 31). *Hunley*, commissioned last June, was the first sub tender built by the U. S. Navy since World War II, and the first in history built from the keel up to service and maintain the *Polaris* missile SSBNs.

In addition to SSBN support, which includes service to the *Polaris* subs' nuclear power plants, *Hunley* and *Holland* were designed to make any repair on any sub that needs



NEW SUBS — (left to right) *USS Jack* (SSN 605) slides down ways at Portsmouth, N. H.; *USS Daniel Webster* (SSBN 626) is launched, and *USS Lafayette* (SSBN 616) is commissioned at Groton, Conn., shipyard.

anything less than a major overhaul.

Holland is 599 feet in length, measures 83 feet across the beam, and will displace approximately 19,000 tons (full load displacement).

Her complement will consist of 50 officers and 900 enlisted men.

The new tender is the third U. S. Navy ship named in honor of John Philip Holland, sometimes called the father of the submarine.

Holland, who was born in 1840, envisioned submarines as instruments of science, commerce and exploration, as well as weapons of war. He moved to the U. S. from his native Ireland in 1873 and submitted sub designs to the Navy.

In 1900 a *Holland* sub was accepted by the Navy. It was Submarine Torpedo Boat Number 1, appropriately named *Holland*.

The second *Holland* was a sub tender (AS 3) which served from June 1926 to March 1947, earning the Navy Unit Commendation and two battle stars for operations in the Pacific during World War II.

The Navy at present has eight tenders in commission, six of which are of the World War II *Fulton* class.

The six *Fultons*, which are 530 feet in length and displace 16,000 tons full load, are *Fulton* (AS 11), *Sperry* (AS 12), *Bushnell* (AS 15), *Howard W. Gilmore* (AS 16), *Nereus* (AS 17) and *Orion* (AS 18).

Nereus, *Orion* and *Sperry* have undergone conversion in recent years, and are now equipped to service nuclear-powered subs.

uss Proteus (AS 19), originally a *Fulton* class tender with the above dimensions, now serves as an SSBN

support ship, having been extended 44 feet in length and fitted with nuclear sub and *Polaris* missile sub support capability.

Hunley rounds out the active sub tender fleet.

Nereus and *Sperry* are assigned to the Pacific Fleet; the others work the Atlantic.

Sub Tender and ASW Ships

Three surface ships scheduled to be launched in January 1964 are under construction at West Coast yards with submarines a foremost consideration. One of the new ships will be a tender, the others ASW ships.

Simon Lake (AS 33), first in a new class of tenders, will be capable of making any submarine repair less than a major overhaul, including the servicing and maintenance of SSBN nuclear power plants. She measures 642 feet in length, displaces 21,450 tons (full load displacement), and will be manned by 1387 officers and enlisted men. Her name was selected in honor of the pioneer who produced U. S. Navy submarines in the early 1900s, and who, until his death in June 1945, served as a World War II Navy advisor. The new tender is under construction at Bremerton, Wash.

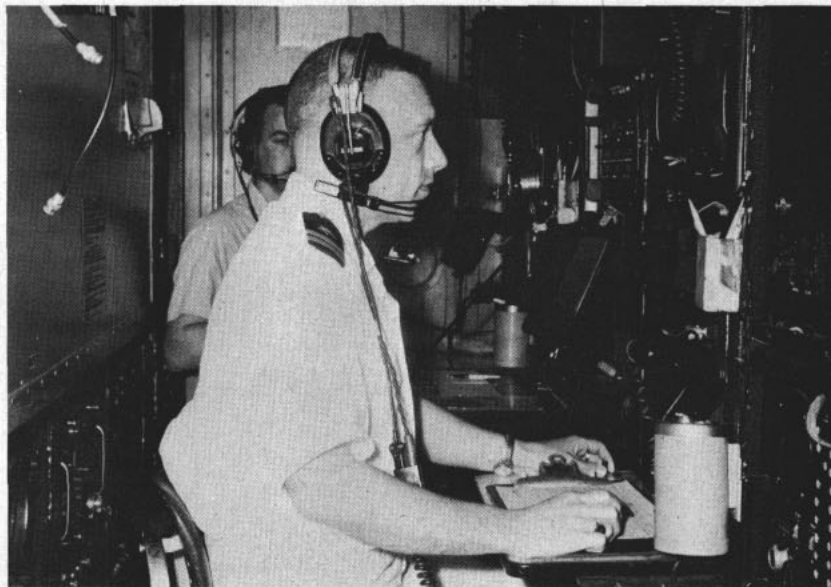
For antisubmarine warfare operations, *Ramsey* (DEG 2), under construction at Seattle, Wash., is being fitted with *Dash* drone ASW helicopter equipment, the *Asroc* antisub rocket launcher, and additional torpedo launchers. The new guided missile escort ship will have a single 5-inch/38-caliber gun mount forward, and a single *Tartar* surface-to-air

missile mount aft. She will measure 414 feet, six inches, in length and 44 feet at the beam, and will displace approximately 3400 tons. Her manpower count will be 248.

Ramsey is named for ADM De-Witt Clinton Ramsey, who was awarded the Navy Cross for his extraordinary heroism and leadership as a task force commander during the Battle of the Solomons in World War II. He served as Vice Chief of Naval Operations from 1946 to 1948, and later as Commander in Chief Pacific and U. S. Pacific Fleet, and High Commissioner of Pacific Trust Territories. ADM Ramsey retired in May 1949, and died in Philadelphia, Pa., in September 1961.

At San Francisco, *Bradley* (DE 1041), another ASW ship, is being fitted with *Dash*, *Asroc*, antisub torpedo launchers, and 5-inch/38-caliber gun mounts forward and aft. Her over-all length and beam measurements and displacement are the same as *Ramsey's*.

The new escort ship is named for CAPT Willis Winter Bradley, Jr., a Medal of Honor winner ("For extraordinary heroism and devotion to duty at the time of an accidental explosion of ammunition aboard *uss Pittsburgh* on 23 Jul 1917"). CAPT Bradley served as commanding officer of the cargo ship *uss Bridge* (AF 1) and the heavy cruiser *uss Portland* (AC 33), and as commander of a destroyer squadron before he was appointed to the Board of Inspection and Survey, on which he served throughout World War II and until his retirement in 1946. The MOH hero died in August 1954.



GCA WATCH OFFICER, LT R. Moore, keeps eyes on radar screen as he gives instructional information to plane approaching Naples, Italy.

Yarnell Commissioned

The Navy's newest frigate, *uss Harry E. Yarnell* (DLG 17), has been commissioned only a few hundred yards from the Navy's oldest frigate, *uss Constitution*, at the Boston Naval Shipyard.

Carrying surface-to-air *Terrier* missiles fore and aft, *Yarnell* displaces 7650 tons and is 533 feet long. This makes her nearly three times longer and four times heavier than *Constitution*.

In addition to the *Terrier* missile, she is equipped with antisubmarine rockets (*Asroc*), conventional 3-inch/50-caliber guns, and torpedo tubes. A helicopter landing platform and search and detection equipment add to her capabilities.

Yarnell belongs to a new class of guided missile frigates, the first of

which was her sister ship, *uss Leahy* (DLG 16). Compared to earlier guided missile frigates, these ships are larger, heavier, and have greater missile firepower.

All spaces are air-conditioned and two steam turbines provide the power for speeds of more than 30 knots. Twenty-one officers and 352 men make up *Yarnell's* complement.

The new frigate is the first ship to be named for the late Admiral Harry E. Yarnell. An 1897 graduate of the U. S. Naval Academy, he served in the Spanish-American War, the Philippine Insurrection, the Boxer Rebellion in China, and World War I.

After retiring from active duty in November 1939, ADM Yarnell was recalled to active duty just before the outbreak of World War II. He served

as a special advisor to the Chinese Military Mission from November 1941 until January 1943. Again recalled in June 1943, he served in the Office of the Chief of Naval Operations until relieved of all active duty in December 1944. He died in 1959.

They Help You Fly Right

The thousands of high-flying pilots and crewmen who operate from U. S. Naval Station, Roosevelt Roads, Puerto Rico, each year rely on just six men of the liquid oxygen plant there for their life-giving oxygen supply while in the rarefied atmosphere.

The half-dozen men produce both the conventional form of oxygen, and the unusual liquefied form. Working on a 'round-the-clock basis, they manufacture 260 gallons of liquefied oxygen per day. One day each month they devote their talents to the production of the gaseous form of oxygen, which is much easier to produce than the liquefied form.

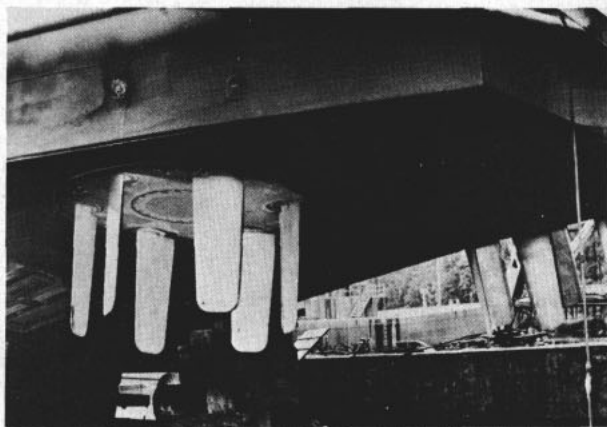
Production of the liquid form of oxygen involves a number of steps.

First, the air is purified and "dried out," then fed into a compressor, which compresses it to 2600 pounds per square inch. Then it is rapidly expanded. When it expands, it gets so cold it turns into a liquid.

The partially liquefied air is fed into a distillation column, a two-story-high affair which separates the various gases that make up the air we breathe.

Oxygen turns into a liquid at 297 degrees below zero, and the other gases must be colder to liquefy, so the oxygen settles to the bottom of the column and then it is drawn off.

Air is composed mainly of oxygen



A TWISTER — LCU 1620, fitted with two vertical-axis propellers, can stop in three quarters of her length, from full speed of more than 11 knots, and can turn complete circle in still water in less than 10 seconds.

Navy Has Had a Communication Satellite Since '54—It's Out of This World

Although it's not generally known, the Navy has had a communication satellite since 1954. It is the moon.

In tests conducted that year, the moon was used as a reflector to transmit and receive radio messages and photographs between Hawaii and Washington, D. C.

The Naval Radio Station, Wahiawa, Oahu, Hawaii, now a branch of the Naval Communications Station, Honolulu, was used to relay the first message.

Today the moon relay system is capable of operating between five and eight hours a day, using two transmitters and two receivers. However, this daily operating period can only be achieved when the moon is visible at both stations. The transmitters are located at Opana, Oahu, and Annapolis, Md.; the receivers at Wahiawa, Oahu, and Cheltenham, Md.

Messages transmitted by this sys-

tem travel approximately 500,000 miles—from Hawaii to the moon to Maryland—in two-and-one-half seconds.

Each transmitter and receiver is housed in a small concrete building with an 84-foot parabolic dish antenna mounted on its roof.

The moon relay system has two advantages over other communications systems. Its operation is not affected by sun spots and atmospheric disturbances. It is also considered to be jam-proof, because it would require an identical system to jam or disrupt its messages.

Unaffected by atmospheric conditions, it acts as a safety-valve to prevent messages from becoming backlogged when conventional circuits are unusable.

The Naval Communications Station, Honolulu, has three main branches—located at Pearl Harbor, Wahiawa, and Lualualei—which employ over 1000 officers and men.

Over seven-and-one-half million messages a year are handled by these stations.

During astronaut Walter M. Schirra's six-orbit flight on 3 Oct 1962, NAVCOMMSTA Honolulu was responsible for relaying his voice to the National Aeronautics and Space Administration's control facility at Kokee, Hawaii. This station also provided voice and teletype communications between the commander of the recovery task force and the ships and planes of the force stationed near Midway Island.

The communication station's most important job is keeping the Navy's Pacific Fleet ships in touch with their headquarters ashore. The 500,000-watt, very low frequency transmitter at the Lualualei Station is responsible for a large part of this task. It is capable of contacting Navy ships operating anywhere in the Pacific.

and nitrogen. Nitrogen does not liquefy until it reaches a temperature of 321 degrees below zero. The oxygen plant also produces nitrogen, but as a separate product, not as a by-product.

The other gases that make up air are eliminated except .05 per cent of the argon, which is mixed with the liquid oxygen. The oxygen is 99.5 per cent pure.

The plant provides oxygen for pilots and crewmen for high-altitude flying. The older aircraft use the gaseous form, and the new jet airplanes use the liquid oxygen systems.

Whether the plane uses the gas or liquid system, the end product is always the vaporized form of oxygen. The liquid type turns to a gas when its temperature is raised. The liquid system has one major advantage—on a volume-to-volume ratio, there's much more oxygen in the liquid form than in the gaseous.

— Bill Mussett, JO2, USN.

Buoys Do a Man's Job

That was quite a switch the Navy's U. S. Fleet Weather Facility, San Diego, pulled recently. They sent a couple of buoys to sea to do a weatherman's work.

The buoys, in this case, were robot weather buoys which were moored at two separate locations off the

lower California coast. They represent the beginning of an experiment aimed at furnishing more complete weather data to San Diego.

The area where the two robot buoys have been anchored—one 170 miles and one 370 miles southwest of San Diego—has long been considered a blind spot by weather forecasters. There is little ship traffic in that vicinity, and a storm or bad weather can oftentimes approach quite close to San Diego before it is detected.

Fleet Weather Facility, San Diego, which is conducting the tests, is hopeful that the two buoys, operating in conjunction with a radar

weather station at Catalina, will provide at least part of the answer to this problem. If they do, more of the robot buoys will be stationed in other trouble spots.

Painted a fluorescent reddish-orange with two vertical blue stripes for ready identification, the foam-filled fiberglass buoys are eight feet in diameter and three feet thick. Each carries a 20-foot antenna mast supporting a radar reflector and propeller-driven wind equipment. Auto-

(Continued to Page 38)

International Shooter Badge

Navy Chief Petty Officer Kenneth L. Pendergras is the first person in the naval service to receive the United States Distinguished International Shooter Badge. The recipients of this award must have won a gold medal for first place in a recognized international shooting match.

Chief Pendergras qualified by being a firing member of the U. S. World's Championship Skeet Team in Cairo, Egypt, in October 1962. He was the last one to fire and knew that he had to break 25 out of 25 targets for the U. S. to win—and he did.

Chief Pendergras is shown being congratulated by CAPT J. L. Counihan, USN, Chairman of the Interservice Sports Committee.



matic equipment installed inside will broadcast wind velocity and direction, barometric pressure and air temperature in Morse code every six hours.

A tripod suspension weight extends nine feet below each of the buoys for stability in rough seas. Mooring cable is multiple-strand wire rope tested to anchor the 1200-pound buoy even during heavy weather. Each has a 20-foot radius of drift, and is so constructed that a fishing vessel would merely shove it to one side without harm to buoy or boat in case of an accidental collision.

Only one other automatic weather station is currently in operation at sea. This is NOMAD, a boat-type station moored in the middle of the Gulf of Mexico, which has operated quite successfully during the last three hurricane seasons in that area.

NavCad of the Year

The Outstanding Naval Aviation Cadet award for 1962 has been presented to ENS David G. Mitchell, a young bachelor with varied interests and a promising future.

The 26-year-old Mitchell is an accomplished sky diver, skin diver and ham radio operator, who achieved the highest over-all score among his fellow students in flight proficiency, academics and officer-like qualities while enrolled in the Navy's Flight Training Program at Pensacola, Fla. He flew to Washington, D. C., recently, to receive the Cadet of the Year Gold Watch Award, and met President Kennedy, Secretary of the Navy Korth and other government officials.

A native of Arlington, Mass., Mitchell signed up as a NavCad in April 1961 after serving in the Air



OUTSTANDING NavCad of 1962, ENS David G. Mitchell, USN, is congratulated by President Kennedy.

Force as an enlisted man and studying at Worcester Junior College and Michigan University. He earned an associate engineering degree in electrical engineering, awarded by Worcester Junior College in June 1959.

Commissioned and designated a naval aviator last September after completion of flight training at Pensacola, Mitchell moved on to Corpus Christi, Tex., for advanced training with high-performance jets, working with the F11A *Tiger* fighter plane.

Mitchell's contact with flying came years before he signed up as a NavCad. He qualified for a private pilot's license in 1959 after completing 75 hours of flight time. He's a member of the Parachute Club of America, and, at last count, had made 83 jumps and sky dives. As a ham radio operator, he holds the Amateur Radio Technician license, and a First Class Radio Telephone license with radar endorsement.

After he was graduated from ad-

vanced training, Mitchell was selected for special training with the National Aeronautics and Space Administration. He is now assigned as an instructor with Training Squadron Three in Florida.

Forrestal's Moonlighters

Senior naval aviators of Carrier Air Group Eight aboard USS *Forrestal* (CVA 59), are now answering the call, "Relieve the watch; on deck section one," or two, or three. Commanders and lieutenant commanders attached to the air group are being offered the opportunity to train and qualify as underway OODs.

Aboard most carriers, training for underway OOD is reserved for the grades of lieutenant and below. But *Forrestal's* program is an effort to bridge the gap in officer training and experience caused by an early career concentration on aviation.

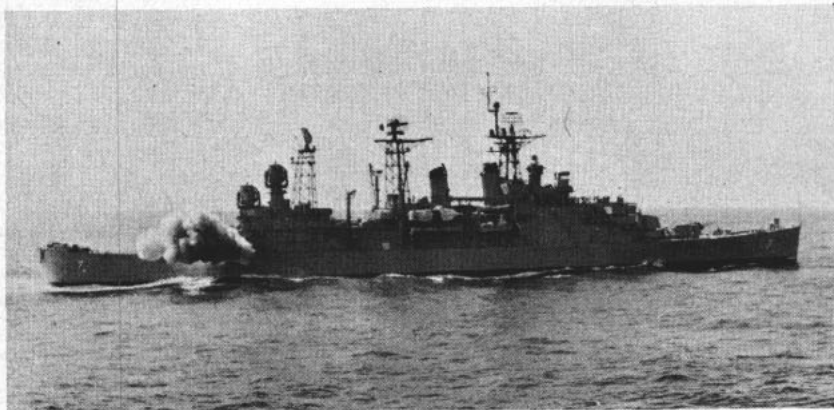
The training and qualifying of senior air group aviators for underway OOD calls for ambitious CDR and LCDR grade aviators, a heavy operating schedule, and a special watch bill aboard the carrier. Air Group Eight supplies the first ingredient, the Sixth Fleet operating schedule takes care of the second, and *Forrestal* provides the special watch bill.

Since all the trainees hold important positions in the air group, it is necessary to conduct OOD training so it will not interfere with the group's flying schedule. *Forrestal's* answer is to provide individual tutoring and allow these officers to stand watches at their convenience. When the program was started, two of *Forrestal's* experienced OODs were taken off the regular watch bill and assigned to train three aviators each. By careful scheduling, these groups of three, plus their instructor, were combined into a watch team and used together on the bridge.

The key to the system was to grant special status to the teams in the following two ways. First, they were not rotated on the regular watch bill. And, they were also permitted to use members of the regular watch for fill-ins as required.

When possible, the team leaders selected the most active bridge watches for training. Sorties, port entries, replenishments, formation rendezvous and ASW exercises gave the most experience in the shortest time.

Approximately 125 hours of



SMOKE AT LAUNCH—A *Terrier* missile streaks from USS *Springfield* (CLG 7) during missile firing exercise off coast of Southern France.

bridge watch time, and 100 hours of briefings, ship's tours, and study, proved to be sufficient to prepare an officer to take the deck.

He was then required to stand the "top watch" (underway OOD), during each of the ship's major evolutions, as well as several normal steaming watches. If his performance met the high standards required during fleet operations, the officer was then awarded his letter of qualification.

The idea behind such training, to strengthen the potential of aviation officers for command at sea, is not new. And during the past four months on board *Forrestal*, that idea has become a reality.

Results at the time of this writing: six naval aviators qualified as underway OOD, six others in training, plus a strengthening of the carrier-air group relationship.

CVS Sails with Less Tonnage

The 55 sailors on board *uss Lake Champlain* (CVS 39) had just completed an exercise session and were heading for the mess decks. Walking down the chow line they passed up the spaghetti and potatoes, chose sparingly of the meat and vegetables, ignored the cake and ice cream, and stopped in front of the lettuce and fresh fruit table.

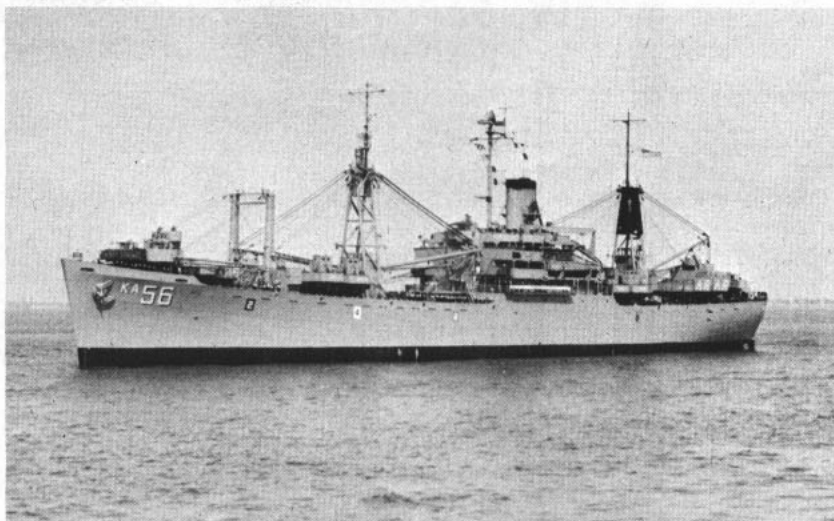
The sailors' purpose was to reduce drastically those extra pounds they've accumulated, through exercise and cutting their calorie intake to 1000 per day. And the program is working well.

The medical officer in charge of trimming down *Lake Champlain's* well-rounded Navymen reports that most of his charges are doing fine, with losses of seven pounds average the first week and a bit less each week thereafter. In most cases, men who have not previously been able to lose weight are reporting smaller dimensions.

The average excess beef on the 55 reducing sailors is 22 pounds per man. Over half of the 55 are senior petty officers.

One of the incentives in the reducing program is that excess weight cuts down their desirability for reenlistment, and is not helping their chances of advancement. But the big factor is the improvement in their appearance.

The rest of *Lake Champlain's* crew is cheering the slim-liners on to new achievements.



FROM DOWN UNDER — *USS Arneb* (AKA 56) has returned to Norfolk, Va., after seven-month, 32,000-mile supply mission to bottom of the world.

Man Overboard

"When they pulled me out of the water they said I was as blue as my dungarees. I guess the water was cold, but at the time I didn't have much time to notice it."

Of chief (and immediate) interest to William Miller, AA, was a speedy rescue. He wasn't disappointed.

It was one day early this year, and *uss Franklin D. Roosevelt* (CVA 42) was sailing at 21 knots in the Mediterranean, launching aircraft. Miller, on the flight deck, was caught in a jet blast and hurtled overboard into the frigid and turbulent waters 60 feet below.

"I don't remember anything about falling. The first thing I knew I was

in the water swimming."

He didn't have to swim for long, although the five minutes he spent in the stormy, 50-degree water seemed a lot longer.

"I went under with every swell. Each time I swallowed more water. I was beginning to think I'd had it."

Miller was wearing his foul-weather jacket at the time, but threw it off when it became water-soaked and started pulling him under.

uss Myles C. Fox (DDR 829), 1500 yards from *Roosevelt* when the "man overboard" alarm sounded, spotted Miller and eased about for his rescue. Walter M. Roberson, Jr., SN., jumped over the side of *Fox*, swam through the heavy seas to Miller's side, then helped him back to the ship.

"On board *Fox* they treated me like a special guest. Guess I was, sort of. First they offered me brandy, but I didn't want any. Then they offered me coffee, but I refused that, too. Later, I felt a little better and ate some soup."

A message to *Roosevelt* reported Miller to be in good condition, suffering only from a headache. "I didn't have to go to sick bay because there really wasn't anything wrong with me—I was just a little scared and cold."

After a day of rest on board the destroyer, Miller was transferred back to his ship. His parting comment: "This has been very interesting, but I don't think I'd care to do it again."

The moral? Miller kept his wits about him, most important of all, didn't panic. The Navy did the rest.



A BIG CATCH — David W. Carroll, YNCS, USN, poses beside 160-lb. halibut boated off Kodiak Island.

Brief news items about other branches of the armed services.

THE FIRST TIE-DOWN FIRING of the *Apollo* lunar spacecraft launch escape system provided another milestone on man's path to the moon.

The escape structure will protrude above the *Apollo* spaceship like a bowsprit when the National Aeronautics and Space Administration launches its manned vehicles toward the moon. Its job will be to fire in any emergency during launch, pull the spacecraft up and away from the booster rocket, and permit deployment of parachutes so the astronauts can return safely to earth.

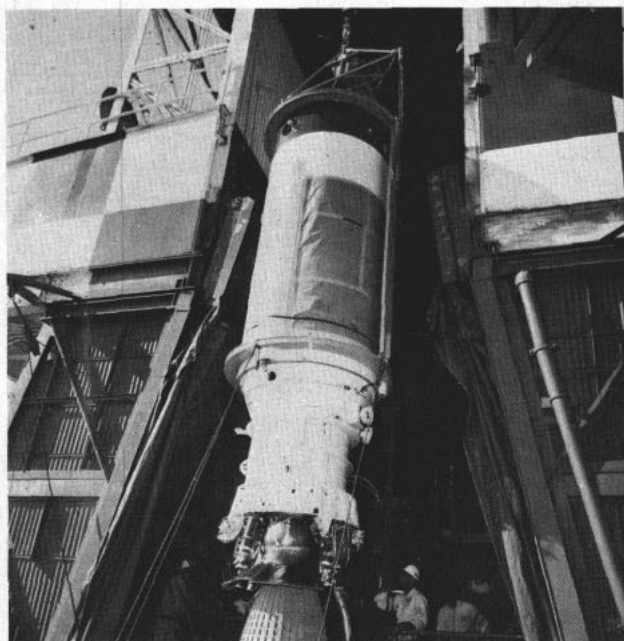
The test marked the first time that all major elements of the escape system have been assembled and tested as a package.

Mounted in a vertical position, the assembly extended 35 feet above the floor of the test bay. From the bottom up, the components of the system include the launch escape tower; the launch escape motor; a section incorporating the jettison motor; a section enclosing the pitch control motor; and a conical forward section containing instrumentation. During the test the system was tethered to the test pad to prevent it from rising.

A major test goal was to verify the design soundness of the tower under actual conditions of rocket thrust loads, vibration and exhaust temperature.

To gain knowledge in these and other areas, engineers hooked up strain gauges, tri-axial accelerometers, thermocouples, heat flux meters, microphones and a myriad of other instruments to important locations on the motors and tower.

Future tests of the system will be held at White Sands, N. M., and will include actual airborne launchings of the escape system from the launching pad, and eventually test firings during sub-orbital and orbital unmanned flights of the entire *Apollo* structure.



USAF Agena launch vehicle is hoisted to top of gantry at Cape Canaveral for mating with *Atlas* booster.



THE SANDPIPER, Army's experimental lightweight, rough terrain forklift is designed for clearing drop zones.

THE ARMY IS RECEIVING 400 new four-wheel drive tractors, commercially developed to its own specifications.

The new tractors have hydraulic steering and are powered by six-cylinder diesel engines. They can ford three feet of water and be equipped with a dozer and winch, pull a scraper or trailer, or be fitted with a snow-plow or compactor wheels.

They are powerful enough to handle tough dozing assignments and fast enough to maintain convoy road speeds while pulling a heavily loaded trailer.

The tractors have a 140-inch wheelbase, are 124 inches wide and 136 inches high.

Despite their size, they can be maneuvered easily and, at 52,000 pounds each, can be transported by air.

★ ★ ★

SCIENTISTS OF THE AIR FORCE Missile Development Center at Holloman AFB, N. M., have come up with a number of ways of finding out how much punishment a nuclear reactor can take if a missile in which it is carried should fail during a launch.

In the past, they have submerged reactors in water, dropped them on concrete, blasted them with TNT, and doused them with liquid oxygen. More recently, they've taken a cylindrical reactor package which measures 18 by 24 inches, and fired it at speeds up to 520 mph, through a 36-inch hole in a block of concrete.

The latter of these reactor punishment tests was conducted by the Track Test Division of MDC, using a SNAP (System for Nuclear Auxiliary Power) reactor test unit. The purpose of the test was to determine what would happen to the reactor, particularly the sodium potassium liquid metal used as a heat exchanger, if the unit should hit the water at high speeds.

The SNAP reactors did not contain fuel or other radioactive material.

The thread-the-concrete-needle idea was a logical conclusion. Ordinarily, a rocket sled would follow the reactor into the water, resulting in debris that would hamper observations.

The concrete block, with a 36-inch diameter hole in the center, was placed on the rails of the rocket sled track. At peak velocity, the sled, which was made of wood, smashed into the block, destroying itself.

The reactor was thrown through the hole and into a tank of water at the desired speed. High speed cameras recorded the impact through the plastic walls of the tank.

★ ★ ★

ARMY UNITS BASED in Europe are being equipped with the new solid fuel *Sergeant* missile system in a program designed to phase out USAREUR use of the liquid fuel *Corporal*, which has been operational in Europe for the past six years.

Replacing the *Corporal* system with *Sergeant* is part of an Army modernization program.

Although both missiles are capable of carrying nuclear warheads, *Sergeant* is less complicated. It has a solid propellant motor which shortens firing preparation time, and requires less manpower and maintenance equipment than *Corporal*. In addition, *Sergeant* can be fired from mobile launchers.

★ ★ ★

THE AIR FORCE THOR space booster rocket has launched its 100th space vehicle. In 93 of the 100 launches from either Vandenberg Air Force Base, Calif. or Cape Canaveral, Fla., *Thor* has performed successfully.

Besides being used in 100 space launches, 82 *Thor* boosters have been used in support of military and scientific programs.

Developed from the Air Force *Thor* intermediate range ballistic missile, the space booster was first tried on 17 Aug 1958. Combined with a modified *Vanguard* second stage and a solid propellant third stage to form a launch vehicle known as the *Thor Able I*, it lifted off from Cape Canaveral in an attempt to put a scientific satellite around the moon, but a malfunction destroyed the vehicle 77 seconds after launch.

However, a little more than a month later, a second *Thor Able I* sent the *Pioneer I* spacecraft over 71,000 miles into space—the deepest penetration of space up to that time. This probe confirmed the existence of the Van Allen radiation belt and provided more valuable data on this phenomenon.

Thor has since launched Army, Navy, and National



BIG SHOT — Pennsylvania's 28th National Guard Division fires *Honest John* during training session.

Aeronautics and Space Agency satellites.

From February 1959 to February 1962, the Air Force achieved numerous technical firsts, due in part to the reliability of the *Thor* booster. Among these were:

- First satellite to achieve polar orbit.
- First capsule to be recovered from earth orbit.
- First capsule to be recovered in mid-air.

★ ★ ★

THE ARMY has conducted its first successful off-range test firing of the rugged *Sergeant* missile. The missile was launched from the Plains of San Augustine facility near Datil, N. Mex. and impacted on the White Sands Range, White Sands, N. Mex.

The primary purpose of the test firing was to study *Sergeant's* flight characteristics on a west-to-east trajectory.

Sergeant is a solid-propellant missile system which became operational last October. It is replacing the less mobile, liquid-fueled *Corporal* assigned to the NATO defense forces in Europe.

It is air transportable and is launched from a near vertical position off a mobile erector-launcher.

★ ★ ★

AIR FORCE's F-105D tactical fighter is being given more punch. Now able to carry four 750-pound bombs, modifications under way on the supersonic jet will permit it to carry as many as 16 such bombs on external mounts.

With the added weapons capability and the all-weather navigational and fire control electronic systems that are built into the F-105D, excellent close tactical support of ground troops will be possible.

Speed, maneuverability and firepower qualify the F-105D for some 15 different types of missions, and it has been determined that it can now carry over 4000 combinations of weapons. These range from smoke, fire, and leaflet bombs to guided and unguided missiles (*Sidewinder* and GAM 83), a variety of bombs up to 3000 pounders, nuclear and thermonuclear missiles, and a 20mm automatic cannon that can fire at the rate of 6000 shots a minute.

Changes are expected to be complete by late 1963.



PILOT MODELS Army's new M-17 gas mask, worn by all soldiers during a field training exercise in Italy.

THE BULLETIN BOARD

Here Are Changes in Regs Concerning Advancement Exams

WITHIN a relatively short time, E-6s will have twice as many opportunities each year to strike for chief as at present. In 1964, both February and August examinations for POIs taking the test for chief petty officer will be scheduled. Thereafter, E-7 exams will continue to be administered twice annually.

Several other changes to BuPers Inst. P1430.7D, incorporated in Change Three to that Instruction, will affect the path of advancement and eligibility for advancement in rating of many active duty enlisted personnel. Change Three was issued 22 April, and is now in effect.

• **Completion of Schools** — One part of the change allows for satisfactory completion of Class "B" school to satisfy the training course requirement for E-5 and E-6 rates. Previously, only E-6 candidates enjoyed this benefit.

Two rates have been added to the list of rates requiring successful completion of a school to establish eligibility for advancement. Personnel striking for HM3 are now required to complete Class "A" Hospital Corps School successfully, and AME3 strikers need Aviation Structural Mechanic Equipment Class "A" School to be rated. Previously this list included only PR3, DT3, MNCA, MUCA, AGCA and PT3.

• **Enlisted Women** — The paths of advancement for enlisted women have been slightly altered. Enlisted women will no longer be permitted to enter the commissaryman or ship's serviceman ratings, but data systems technician and the new aviation maintenance administrationman ratings will be open to them.

• **Foreign Nationals** — As in the past, foreign nationals will not be recommended for advancement to a rate or rating which requires access to classified information, except in accordance with BuPers Instructions in the 1440.5 series, but the list of rates and ratings open to foreign nationals has been slightly altered. (There is a difference between "foreign nationals" and "immigrant aliens"—see the paragraph below.)

Personnel in this category are no longer eligible for advancement in the interior communications electrician rating, but are now eligible for the aviation machinist's mate and parachute rigger ratings.

Postal clerk, though not a rating generally requiring access to classified information, remains closed to foreign nationals because, in accordance with OpNav Inst. P2700.14B, postal clerks must be U. S. citizens.

• **Immigrant Aliens** — Two subparagraphs defining the status of immigrant aliens have been added to the Instruction. An immigrant alien is defined as an individual who has been lawfully admitted to the United States for permanent residence under an immigration visa, and who has filed a declaration of intent to become a citizen by executing Naturalization Form N-315.

Immigrant aliens are eligible for advancement to and in any rate or rating for which they are qualified. For ratings requiring access to classified information, however, eligibility for security clearance (i.e., completion of a satisfactory background investigation) must be established in accordance with Article 1507 of OpNav Inst. 5510.1B before advancement to the rating is permitted.

When an immigrant alien desires

to advance into a "classified" rating, the necessary background investigation will be initiated immediately. If qualification for the rating is contingent upon completion of classified training schools or courses and/or classified Navy-wide examinations, this security investigation must be completed before participation in such training or examination is permitted. Interim clearance may not be granted. Participation in non-classified training and examinations is permissible, but in no case may actual advancement to the rating be effected prior to the establishment of clearance eligibility.

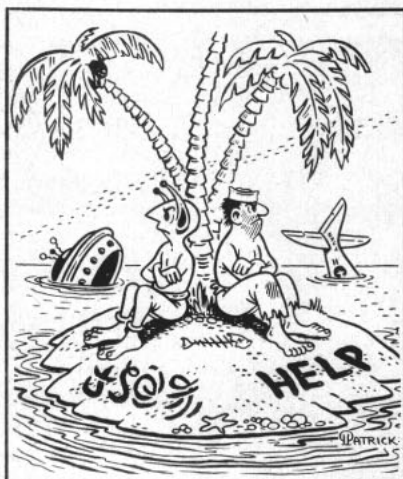
• **Delayed Exams** — Another change in the instruction deals with delayed substitute examinations for advancement in rating exams.

Requests for delayed substitute examinations for personnel who, through no fault of their own, were prevented from taking the examination on the regularly scheduled date, must reach the Naval Examining Center not later than one month after the regularly scheduled date of exam administration. Such a request could previously be submitted to the Naval Examining Center no later than one month after exam date.

• **Disciplinary Status** — Change Three indirectly clarifies the rule regarding the eligibility for advancement of personnel serving a suspended reduction in rating sentence. Previously, BuPers Inst. P1430.7D considered a reduction-in-rating sentence an imposed sentence, thus rendering any individual serving a suspended reduction in rating sentence ineligible for advancement. (BuPers Manual, Article C-7207, states that personnel in a disciplinary status—as opposed to a probationary status—are ineligible for advancement in rating.)

Through omission of the sentence in the instruction defining a suspended reduction-in-rating sentence as an imposed sentence, the period during which an individual serves in a suspended reduction-in-rating status has indirectly been redefined as a probationary period. The individ-

SPACERS



ual is thus eligible for advancement (providing the other criteria, including the commanding officer's recommendation, have been fulfilled) while serving his suspended sentence.

If the individual should be advanced while serving a suspended reduction-in-rating sentence, the advancement automatically remits the remainder of his sentence, and his probation is automatically over.

• **Award Credit** — One award has been added to the list of awards from which credit toward the multiple can be derived. This is the Secretary of the Navy Commendation for Achievement, which is worth 2.00 points.

• **Change in Codes** — The only other major change to the present advancement regulations effected by Change Three is a revised list of processing codes which are used by the Chief of Naval Personnel and the Naval Examining Center when promulgating the results of Navy-wide examinations. Be sure to check the revised translations of numerical codes on your command bulletin board for information regarding your next exam results.

Sperrymen Well Informed By Chief on Career Matters

USS *Sperry* (AS 12) has inaugurated a program of career counseling in an effort to aid more men to advance in their professional fields and to help them further their education. What sparked the program was the Bureau of Naval Personnel Instruction issued last June on the subject of reenlistments.

Under the direction of the ship's I & E officer, the program features personal interviews which are conducted by George A. Oliver, ENCA, USN, designed to point out the fields best suited for an individual.

During the normal tour of duty on *Sperry* all men will be interviewed at least three times. Those finishing their naval service and not wishing to continue are given advice and information concerning the best opportunities open to them in planning for their future as civilians.

For those who are undecided about a naval career, counseling provides the opportunity to point out different programs of advancement through enlisted grades to officer

ranks, in addition to an explanation of programs such as STAR and SCORE.

According to the chief, many Navymen are not aware of the opportunities available for advancement, or future diplomas or degrees. The Navy has many courses open to its personnel through correspondence courses or actual classroom work, after and during duty hours. Studies can be pursued at civilian colleges and high schools in most stateside home ports of ships.

Chief Oliver is well qualified for the job. He received his high school diploma through GED and credits earned while attending the Long Beach, Calif., evening high school. He completed junior college at Long Beach City College and holds several units towards his Bachelor's degree at Long Beach State. He is also a graduate of the Navy's nuclear power program.

The chief stresses to each interviewee the value of taking courses

at schools in *Sperry's* home port of San Diego. Many of the ship's crew have already completed high school in this way, and others are studying for their college degrees.

The program has benefited both the individual Navyman and the naval service. The effects are noticeable in improved on-the-job duties, increased off-duty studies, and in reenlistments.

Marines Switch to Black

The Marine Corps is adopting black uniform accessories. Black shoes, socks, and gloves will replace the dark brown accessories now worn by Marines. The change becomes effective when present stocks of the brown items are depleted.

Because the change will eliminate 188 Federal Stock Numbers, it is estimated that thousands of dollars will be saved annually.

Black accessories are now used by the Army, Navy, and Air Force.

WAY BACK WHEN

The Caves of Yokosuka

Beneath the Naval Base at Yokosuka, Japan, a network of tunnels which zig, zag, and intersect for 20 miles or more, forms a labyrinth that for years has stirred the curiosity of Yokosuka-based Navymen.

The maze of underground space is no mystery at all. The origin of the Yokosuka caves is well documented, even though only 16.5 miles of the estimated 20-mile labyrinth are charted.

The caves were begun on a limited scale in 1940 as air raid shelters. The sand-rock composition of the hills of Yokosuka, covered by only a few feet of top soil,

made the digging of large rooms impossible without extensive supporting braces. Therefore, most of the caves were made relatively small, with connecting tunnels.

But, by 1942, a solidly supported command cave as large as a two-story building had been completed, and work was stepped up to dig in quarters for the base personnel department, arsenal, gunnery and navigation schools, and hospital annex. Tunnels were later dug to connect the command cave with various underground personnel spaces.

In 1945, all machine shops and communications devices were moved underground, and a 100-bed hospital was dug in beneath the base. Two midget submarine assembly plants were gophered near the water front.

After the U. S. Navy moved into the base, the sub assembly caves were extended to form tunnels for vehicular traffic, which are still in use today. The other tunnels, caves, and underground quarters, to which there are 437 entrances throughout the base, are maintained as air raid shelters.

"New" caves have been accidentally uncovered in recent years. An earth roller recently dropped into an uncharted cave while tamping down a roadbed behind the base petty officer's club.



These Rules on Advancement Eligibility May Apply to You

IF YOU'RE HITTING the books in preparation for the Navy-wide advancement tests scheduled for late this month and early next, now's the time to review some of the exam policy points contained in the latest BuPers Notice on the subject.

In addition to announcing the exam schedule, BuPers Notice 1418 (dated 17 May 1963) contains some timely information on many of the aspects of advancement.

• **EN to MM**—If you're an engineman striker (ENSN), or an EN3 or EN2, and hold a BuPers-assigned NEC of nuclear powerplant operator, you may be tested for advancement to the next higher machinist's mate grade. (Here's why: Nuclear submarine allowances now include the machinist's mate rating. Engine-men trained in nuclear propulsion have been filling these billets and some of the MM billets on nuclear powered surface ships. In order to match ratings with actual jobs, qualified ENs are encouraged to switch to MM. Of course, the appropriate training course, practical factor and performance test requirements must be met before any EN will be authorized to compete for MM.)

• **Profile Cards**—After test results are published, your command will be provided with individual profile cards for men and women who failed the exams for E-4, E-5 and E-6. Profile cards will not be provided for E-8 and E-9 candidates.

• **TAR**—Surface TARs in YN, PN, DK and SK ratings, who are attached to naval district and river commands, and all CNARESTRA TARs, will take the same exams written for active duty personnel, but will compete for vacancies only

Exam Schedule

Here's the test schedule. Navy-wide exams for advancement to pay grades E-4 through E-6, and E-9, will be conducted this month and next, as follows:

Exams For	Held On
E-8/E-9	Tuesday, 30 July
E-6	Thursday, 1 August
E-5	Tuesday, 6 August
E-4	Thursday, 8 August

among themselves. TARs not serving in these categories will take the regularly scheduled Navy-wide exams, and will compete with Regular Navymen for advancement openings.

• **LDO**—If you have already been selected for promotion to commissioned status as a Limited Duty Officer, you are not eligible to compete for advancement to E-8 or E-9 (unless you have notified the Chief of Naval Personnel that you do not intend to accept the commission as a Navy officer.)

• **Delayed Exams**—After the regularly scheduled exam dates, authority to administer delayed substitute exams may be granted in cases of individuals who, through no fault of their own, were prevented from being tested on schedule. Requests for delayed exams should be addressed to the Commanding Officer, Naval Examining Center, Great Lakes, Ill. Requests for delayed substitute exams must arrive at the examining center not later than 10 Sep 1963.

(On the subject of delayed exams, COs have been instructed to screen all requests closely. In recent years,

such requests have been excessive, expensive and, in many cases, unnecessary. Less than 75 per cent of delayed exams requested are actually utilized. Should this trend continue, warn advancement officials, the late exam policy may be canceled altogether.)

Other points contained in BuPers Notice 1418 are, for the most part, of administrative interest to COs and testing authorities.

Included is the word on:

- Preparation of NavPers 624 forms.
- Advancement of foreign nationals. (See page 42.)
- Requests for changes in ratings.
- Administration of stenography performance tests for YN.
- Ordering of exams.

List of Motion Pictures Now Available to Ships And Overseas Bases

The latest list of 16-mm feature movies available from the Navy Motion Picture Service is published here for the convenience of ships and overseas bases.

Movies in color are designated by (C) and those in wide-screen processes by (WS). They are available for ships and bases overseas.

Motion Pictures

Nine Hours To Rama (2250) (C) (WS): Suspense Drama; Horst Buchholz, Diane Baker.

Sodom and Gomorrah (2251) (C): Drama; Stewart Granger, Pier Angeli.

Crooks Anonymous (2252): Comedy; Leslie Phillips, Stanley Baxter.

The Impersonator (2253): Sus-



IT'S ALWAYS CONDITION GO to orbit ALL HANDS Magazine; so pass this copy to nine shipmates.

Changing Your Rating?

Two of the fine administrative points in advancement and change of rating policy have been spelled out in BuPers Notice 1418, the latest advancement directive.

Men and women who request a change in rating, and are recommended for such, can't be nominated for advancement in their present rating.

Personnel who are under instruction in Class "A" and "B" schools for the purpose of changing rating will be permitted to compete for advancement only in the rating for which instruction is received. (Exception: Those who have completed less than eight weeks of instruction may be examined in present rating.)

Check BuPers Inst. 1440.5D, BuPers Inst. P1430.7D, and BuPers Notice 1418 (17 May 1963).

pense Drama; John Crawford, Jane Griffiths.

The Desert Rats (2254): Drama; Richard Burton, James Mason (Re-Issue).

Battle At Apache Pass (2255): Western; Jeff Chandler (Re-Issue).

Criss Cross (2256): Drama; Burt Lancaster, Yvonne De Carlo (Re-Issue).

A Swirl Of Glory (2257): Action Drama; Randolph Scott, Adele Jergens (Re-Issue).

Barabbas (2258) (C) (WS): Drama; Anthony Quinn, Silvana Mangano.

Cleopatra's Daughter (2259) (C) (WS): Melodrama; Debra Paget, Robert Alda.

Singer Not The Song (2260) (C) (WS): Drama; Dirk Bogarde, Mylene Demongeot.

The Raven (2261) (C) (WS): Comedy Drama; Vincent Price, Peter Lorre.

You Gotta Stay Happy (2262): Comedy; James Stewart, Joan Fontaine (Re-Issue).

Affair In Trinidad (2263): Drama; Glenn Ford, Rita Hayworth (Re-Issue).

Gunfighters (2264): Western; Randolph Scott, Barbara Britton (Re-Issue).

Stop, You're Killing Me (2265): Comedy; Broderick Crawford, Claire Trevor (Re-Issue).

Diamondhead (2266) (C) (WS): Drama; Charlton Heston, Yvette Mimieux.

Critic's Choice (2267) (C) (WS): Melodrama; Bob Hope, Lucille Ball.

A Bomb For A Dictator (2268) (C) (WS): Melodrama; Pierre Fresnay, Michel Auclair.

Cairo (2269): Melodrama; George Sanders, Richard Johnson.

Prince of Foxes (2270): Adventure; Tyrone Power, Wanda Hendrix (Re-Issue).

Ride The Pink Horse (2271): Mystery Drama; Robert Montgomery, Wanda Hendrix (Re-Issue).

Monkey Business (2272): Comedy; Cary Grant, Ginger Rogers (Re-Issue).

The Mob (2273): Drama; Broderick Crawford, Betty Buehler (Re-Issue).

The Courtship of Eddie's Father (2274) (C) (WS): Comedy; Glenn Ford, Shirley Jones.

Man From The Dinners Club (2275): Comedy; Danny Kaye, Cara Williams.

My Six Loves (2276) (C): Com-

edy Drama; Debbie Reynolds.

30 Years of Fun (2277): Compilation; Charlie Chaplin, Laurel and Hardy.

Operation Pacific (2278): Drama; John Wayne, Patricia Neal (Re-Issue).

The Breaking Point (2279): Drama; John Garfield, Phyllis Thaxter (Re-Issue).

Bend of the River (2280): Western; James Stewart, Julie Adams (Re-Issue).

Man Behind the Gun (2281): Western; Randolph Scott, Patrice Wymore (Re-Issue).

House of the Damned (2282) (WS): Mystery Drama; Ronald Foster, Merry Anders.

Son of Flubber (2283): Comedy; Fred MacMurray, Nancy Olson.

In Search of the Castaways (2284) (C): Comedy Drama; Maurice Chevalier, Hayley Mills.

Papa's Delicate Condition (2285) (C): Comedy; Jackie Gleason, Glynnis Johns.

No Highway in the Sky (2286): Drama; James Stewart, Marlene Dietrich (Re-Issue).

WHAT'S IN A NAME

Between Teiteiripucchi and Aaraanbiru

The Pacific atoll of Eniwetok, which consists of some 40 islets surrounding a 23-mile lagoon 2000 miles southeast of Hawaii, is best remembered as a World War II action site, and, in more recent years, a proving ground for U. S. atomic devices.

Few remember that Eniwetok is the land of Teiteiripucchi, Bokonaarappu, Elugelab, Muzinbaarikku, and other hard-to-pronounce names given the atoll's small islands by Marshallese natives long ago.

During the years since World War II, the U. S. Navy—a major Eniwetok developer and administrator—performed a name-simplifying operation.

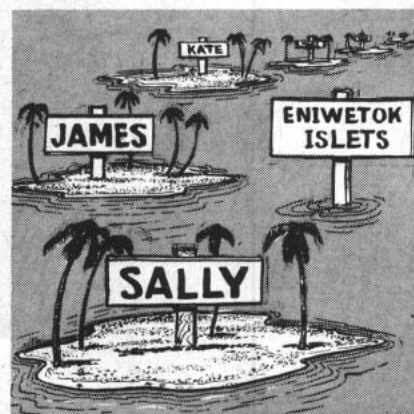
Teiteiripucchi, for example, has been renamed "Gene" by Pacific Missile Range personnel who operate the missile tracking sites.

Names of other islets in the atoll read like a classroom roll call: Keith, James, Sam, Fred, Van, Oscar, Tom, Irwin, Henry, Glenn, Leroy, Bruce, Clyde, Alvin, Mack, David and Elmer.

For a feminine touch, others are named Pearl, Nancy, Kate, Flora, Daisy, Clara,

Belle, Edna, Lucy, Mary, Olive, Ruby, Helen, Sally, Vera, Alice, Ursula, Irene, Tilda, Janet, Yvonne, and Wilma.

Now, when a missile makes contact at Eniwetok, PMR personnel find it's easier, and more clearly understood, to indicate the impact point as "between Gene and Leroy." Using the old names it would be the tongue-twisting "Teiteiripucchi and Aaraanbiru."



Report on Assignment and Rotation of Aviation Officers

CERTAIN CHANGES have been made in tour lengths for all aviation officers including LDOs. These changes are described in BuPers Inst. 1301.35A, along with a broad summary of Navy policies on assignment and rotation for aviation officers.

Upon completion of flight training, or training for the job to be performed as an aviation officer, the normal assignment will be to a squadron in which the just-completed training can be put to use.

When an aviation officer is assigned to his first seagoing squadron, he can expect to remain in the assignment for a full three and one-half-year sea tour, with modifications if it is an overseas squadron.

Aviation officers initially assigned to land based non-ASW squadrons (VW/VR/VQ/VU/HU, etc.) can expect a three and one-half-year tour, modified as required by overseas tours. However, these officers may request rotation to another type squadron after a minimum of two years in their first assignment, or upon completion of an overseas tour, whichever comes first. The following tour will normally be for two years, upon completion of en route training, but the total sea tour will not usually exceed five years.

Requests for rotation, during the first sea tour, must be forwarded to the Chief of Naval Personnel via the

commanding officer and the appropriate type commander. Requests from officers in VR squadrons should be forwarded via the type commander of the type of squadron being requested.

The Instruction points out that transfer requests should be reasonable. For example, an aviator should not expect transfer to a jet squadron if he has had no jet training or experience with jet aircraft. Requests will be considered on the basis of the officer's aircraft qualifications and performance record, plus the effect of such transfer on operational readiness, the availability of the requested assignment, and how much training will be needed to fill the billet requirements.

Following sea tours for officers through the grade of LCDR will be approximately four and one-half years, and emphasis will continue to be placed on split tours. Two years may be spent in a ship, staff, or overseas assignment, then after about six months of functional training in the type of aircraft he is to fly next, he will be assigned to a squadron.

Shore tours for officers from ensign through lieutenant commander will usually be three years in length. Exceptions to this will occur when officers attend certain schools, including five-term, service college, or

postgraduate training. In such instances, the shore tour may be extended to four years.

Commanders and above will continue to be rotated between sea and shore assignments as required to satisfy the needs of the service and the professional development of the individual officer.

After the first sea tour, officers assigned to an aviation squadron homeported overseas will normally have the same overseas tour length as specified for first tour aviation officers. Such tours, however, will not exceed the tour length "with dependents" for a particular area. BuPers Inst. 1300.26 series outlines the tour lengths for activities other than aviation squadrons located overseas, and gives the guidelines for rotation of naval personnel and overseas movement of dependents and household goods. Deviation from this policy will be made by the Chief of Naval Personnel as service needs and career interests dictate.

First tour Reserve officers may be extended in overseas assignments for a maximum of six months over a normal area tour so that their tour length will correspond to their release from active duty date (RAD).

Reserve officers en route to their first sea duty will not be required to extend their obligated service to qualify for overseas transportation of

Location	With/Dep	Rotate to	All Others	Rotate to	Location	With/Dep	Rotate to	All Others	Rotate to
Hawaii (Except VW)	36	CONUS ShorDu	36	CONUS ShorDu	Guam	24	CONUS sqd until RAD or completion appropriate sea tour	24	CONUS sqd until RAD or completion appropriate sea tour
Hawaii (VW)									
a. Straight tour	36	CONUS ShorDu	36	CONUS ShorDu					
b. Midway Rotation Hawaii followed by 18 Midway (accompanied by Dep)	18 to 24	CONUS ShorDu	12 Hawaii followed by 12 Mid- way	CONUS sqd until RAD or completion appropriate sea tour	Argentina, Nfld.	24	CONUS sqd until RAD or completion appropriate sea tour	18	CONUS sqd until RAD or completion appropriate sea tour
Japan	36	CONUS ShorDu	36	CONUS ShorDu	Bermuda	36	CONUS ShorDu	36	CONUS ShorDu
Okinawa	30	CONUS sqd until RAD or completion appropriate sea tour	24	CONUS sqd until RAD or completion appropriate sea tour	Guantanamo Bay, Cuba	24	CONUS sqd until RAD or completion appropriate sea tour	18	CONUS sqd until RAD or completion appropriate sea tour
Philippine Is.	24	CONUS sqd until RAD or completion appropriate sea tour	24	CONUS sqd until RAD or completion appropriate sea tour	Puerto Rico	36	• CONUS ShorDu	36	CONUS ShorDu
					UK, Italy, Spain	36	CONUS ShorDu	36	CONUS ShorDu

dependents and household goods. In these cases, the area tour will not be longer than the remaining obligated service, if the obligated service expires within eight months of the area tour, and is not less than 12 months.

An officer coming from an isolated overseas location where the tour length is two years or less will normally then be assigned to a Fleet activity homeported in the continental U. S. before being rotated to shore duty.

It is not the policy to order an officer to a tour at an isolated overseas location immediately after he has completed a three-year tour with an operational squadron, unless the officer requests it, and the Chief of Naval Personnel approves it.

Below are the overseas tour lengths and rotation policy for first sea tour aviation officers assigned to aviation squadrons homeported overseas. The tours are given in months.

First tour aviation officers who are first assigned to squadrons based in the continental U. S. may be rotated to an overseas squadron for the tour lengths listed below, provided the entire sea tour does not exceed three and one-half years and the officer remains in the same type of squadron that he was first assigned.

DIRECTIVES IN BRIEF

This listing is intended to serve only for general information and as an index of current Alnavs as well as current BuPers Instructions, BuPers Notices, and SecNav Instructions that apply to most ships and stations. Many instructions and notices are not of general interest and hence will not be carried in this section. Since BuPers Notices are arranged according to their group number and have no consecutive number within the group, their date of issue is included also for identification purposes. Personnel interested in specific directives should consult Alnavs, Instructions and Notices for details before taking action.

Alnavs apply to all Navy and Marine Corps commands; BuPers Instructions and Notices apply to all ships and stations.

Alnavs

No. 10—Ordered half-masting of the flag in honor of the Navymen and civilians lost in *uss Thresher* (SSN 593).

No. 11—Called for continuing effort to prevent abuses in mailing of duty-free gifts.

No. 12—Announced convening of selection boards to recommend active-duty officers in the grade of

Cruising in Constitution

uss Constitution, historic *Old Ironsides*, has completed her turnaround cruise for 1963.

Constitution made the annual trip with the aid of three Navy tugs. They helped her about a mile out into Boston Harbor from her berth at the Boston Naval Shipyard, Charlestown, Mass., turned her around, then took her home from the two-hour outing.

Now the flagship of Rear Admiral Arthur H. Taylor, USN, Commandant of the First Naval District, the 166-year-old frigate has her position reversed each year so her masts and yardarms will not be warped by prolonged exposure to winds and sun from the same direction.

This year's cruise left her facing inland, starboard side to the pier. For more on *Constitution*, see this issue's inside front cover.

captain (except TARs) for promotion to the grade of rear admiral.

No. 13—Congratulated the Chief of Information and the First and Ninth Naval Districts on awards for outstanding public relations projects.

Instructions

BuPers Inst. 1120.34A—Prescribes

procedures by which eligible officers may request transfer to other branches of the armed forces.

Notices

BuPers Notice 7300 (23 April)—Summarized procedures for reporting six-digit identification numbers on availability reports.

SecNav Notice 1412 (1 May)—Disseminated a report on criteria for selection to flag rank in the Navy.

BuPers Notice 1520 (8 May)—Issued information on the Navy Postgraduate and Undergraduate Educational Program for the academic year 1964-65.

SecNav Notice 7220 (10 May)—Announced outcome of tests in which personnel were paid on a bi-weekly basis.

SecNav Notice 7220 (16 May)—Suggested procedural "safety precautions" for administration of pay and allowances.

BuPers Notice 1418 (17 May)—Announced schedule of Navy-wide examinations for advancement in rating.

BuPers Notice 1306 (18 May)—Announced sea duty commencement cutoff dates for Seavey Segment 3-63.

BuPers Notice 1070 (21 May)—Issued instructions for using the Leave Record, Officer-Enlisted, NavPers 601-8 (Rev. 1-63).

HOW DID IT START

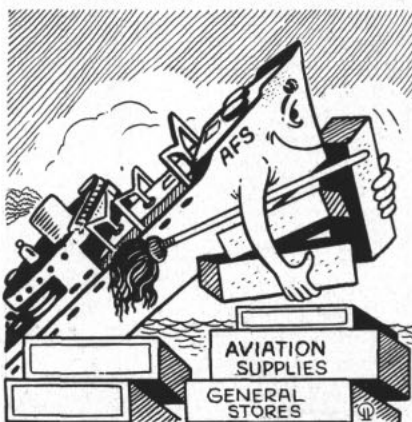
Combat Cargo Ship

Ships of the new AFS (combat cargo ship) class are named for small United States communities with the same names as astronomical bodies. *Mars* (AFS 1) and *Sylvania* (AFS 2), the first two ships of the class, are

named after the planets Mars and Sylvania, and communities of these names in Pennsylvania (Mars and Sylvania) and Georgia and Ohio (Sylvania).

The double-meaning names are appropriate; the AFS will perform double duty, and then some, by carrying out all the cargo replenishment missions of the AF (store ship), AKS (general stores issue ship) and AVS (aviation supply ship). Eventually, the combat cargo ship will replace the three in supplying the Fleet with fresh food, general stores items, and aviation supplies. Much of the AFS cargo will be delivered by air; two cargo helicopters will operate from each.

Construction on *Mars* and *Sylvania* began in early 1962 at San Diego, California. Scheduled commissioning date is January 1964 for *Mars* but is not yet firm for *Sylvania*. The ships are 581 feet in length and have a 79-foot beam.



Summary of Requirements on Changing Your Rate or Rating

REGULAR NAVYMEN and full-time active duty Reservists (including TARS) who want to change ratings now have a greater opportunity to do so provided the change won't produce an imbalance in the over-all distribution of naval personnel.

The new program supplements existing programs to enable Navy-men to transfer to the ratings for which they have the greatest aptitude and interest. Needless to say, the good of the Navy will take precedence over individual preferences.

The following rates and ratings are open: QM1, QM2, QM3, SM2, SM3, RD1, RD2, RD3, SO1, SO2, SO3, TM2, TM3, MTC, MT1, MT2, MT3, FT1, FT2, FT3, GMT, GMT1, GMT2, GMT3, ET1, ET2, ET3, DSC, DS1, DS2, DS3, OM3, RM1, RM2, RM3, CT2, CT3, MA3, MM1, MM2, MM3, MR3, BT3, BR1, EM1, EM2, EM3, IC1, SF3, CE3, ADJ3, AT1, AT2, AT3, AO3, AQ1, AQ2, AQ3, AC3, AB3, AE3, AM3, PR3, AC3, PH3, PT3, AXC, AX1, AX2, AX3, AN, AA, AR, SN, SA, SR, FN, FA, FR, CN, CP, CR, TN, TA, TR, HN, HA, HR, DN, DA and DR.

Applicants for change must select a rating which is less crowded than their present rating and one for which there is an allowance within their duty station.

The applicants must also meet the qualifications prescribed for the rating for which they apply.

Rates and ratings can be changed administratively by the Chief of Naval Personnel. Administrative changes can also be made under authority of the *BuPers Manual* by commanding officers for certain Navymen in pay grades E-3 and below.

Changes in rate and/or rating can also be made by: Successfully completing in-service training or a conversion course in a service school; or passing a Navy-wide examination with or without taking in-service training.

Eligibility requirements are that the applicant must:

- Be a volunteer.
- Complete the required training courses, practical factors and performance tests for the rating he requests.
- Be serving in pay grades E-4 through E-6. (This is an extension

of pay grades. The *BuPers Manual* provided for administrative changes in some categories for men in pay grades E-3 and below as noted above. Chief petty officers are still excluded from eligibility.)

- Have an average of 3.4 or above on all enlisted evaluations for two years before he requests the change.

- Be recommended by his commanding officer.

- Be authorized to compete in, and satisfactorily complete, the Navy-wide examination for the rating requested. Examinations are normally administered for pay grades E-4 and above in February and August. Applications for admittance to examinations must be submitted to the Chief of Naval Personnel at least two months in advance.

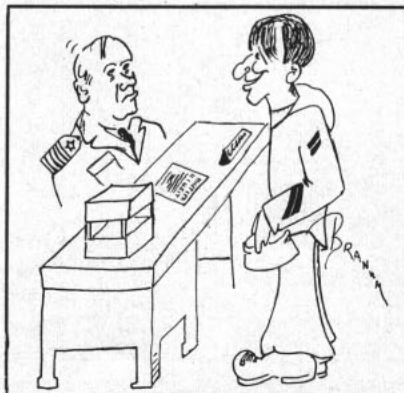
Anyone who has completed Class "B" School in his present rating or Class "C" and functional schools having a course at least 15 weeks long is ineligible to change his rating unless it is related to the rating to which he wishes to change.

Those who are authorized to change their rate or rating will be notified by the Chief of Naval Personnel through the regular Examination Center announcement letter.

Navymen who have been recommended for change in rating will not be nominated for advancement in the rating which they wish to vacate.

Examination for concurrent change in rating and advancement in the new rating will not normally be approved.

All-Navy Cartoon Contest
J. R. Branum, CS2, USN



"Stop me if you've heard this one."

Men who are in a formal program for change in rating may put in their request for change in rating examination up to three months before they expect to complete their requirements.

Those who are not in a formal program must obtain authority of the Chief of Naval Personnel when they are considered by their commanding officer to be qualified to change their rating.

Foreign nationals except immigrant aliens serving in the U. S. Navy may not apply for a change to a rating which requires United States citizenship or access to classified information.

The following are ratings for which they are eligible: AB, AD, AK, AM, BM, BR, BT, BU, CE, CM, CS, DK, DT, EA, EM, EN, EO, HM, ML, MM, MR, MU, PC, PM, PR, SD, SF, SH, SK, SW and UT.

Navymen who are not United States citizens but who are residing legally in the United States under an immigration visa and who have filed intent to become naturalized U. S. citizens within a year, are considered to be immigrant aliens.

An immigrant alien may have access to classified information provided he is cleared for security through a background investigation.

However, if he does not follow through with his intention to become a citizen, his security clearance will be revoked and he will be considered as a foreign national.

Details on changes in rate and rating can be found in *BuPers Instruction 1440.5D*. This instruction applies to enlisted women and men.

Rates and ratings to which enlisted women may be permitted to change are limited to: ET, YN, SK, TD, AC, AT, AG, DS, IM, RM, PN, DK, JO, DM, AK, AZ, OM, CT, MA, DT, LI, PH, HM, SA, SN, AA, AN, HA, HN, DA and DN.

Rules Laid Down on Inter-Service Transfers

By public law, the President of the United States may transfer any commissioned officer of the Army, Navy, Air Force, or Marine Corps, to any other of these services. The officer must, of course, consent to the transfer to the other service.

The Secretary of the Navy has directed the Chief of Naval Personnel to issue supplementary instructions to members of the naval service concerning interservice transfers.

BuPers Inst. 1120.34A provides the latest information. Addressed to all ships and stations (less Marine Corps field addresses not having Navy personnel attached), the instruction is dated 7 May 1963.

Twenty Year Limitation Offers More Billets to Lower Rated Stewards

There will be more billets open for stewards in the higher ratings as a result of a new retention board established in the Bureau of Naval Personnel.

There are several good reasons for this step. An exceptionally high reenlistment rate, coupled with a continued reduction in petty officer requirements, has resulted in overcrowded conditions in the higher steward pay grades.

Soon, a large number of stewards, enlisted during World War II, will become eligible for transfer to the Fleet Reserve. Naval Reservists will become eligible for either transfer to the Fleet Reserve or immediate retirement.

If as many of these men wish to remain on active duty as has been the case in the past, advancement opportunities for the lower steward rates will be greatly reduced. This is the principal reason for forming the retention board.

All stewards except senior and master chiefs who wish to remain on active duty after completing 20 years of active service must now submit a request to the Chief of Naval Personnel.

Requests for retention will be considered by a board of officers in the Bureau. The board will consider each request on the basis of performance and qualifications.

The new program is explained in BuPers Inst. 1133.16. Conflicting portions of *BuPers Manual*, Articles C-1403 and C-1407, and BuPers Inst. 1133.4A and 1130.4 series are not in effect while this system is in use.

After each request for retention is considered by the board, the individual will be notified of the decision made by the retention board.

SPACERS



"... But my friend is positive, operator, the number is Jupiter 7-6-5-76."

Stewards who are not selected for retention will be given instructions concerning submission of their applications for the Fleet Reserve or retirement. Normally, they will be permitted to remain on active duty up to a maximum of one year from the date of application for retention.

Retention requests should be submitted to the Chief of Naval Personnel on Enlisted Evaluation Report NavPers 1339 (Rev. 3-56). Each request should specify the term of service desired.

Stewards affected by the program fall into four categories listed and explained below.

Category A — Those approaching the completion of 20 years of active service upon expiration of present enlistment, extension of enlistment, or active duty agreement, who wish to continue on active duty.

Commanding officers are instructed to limit terms of enlistment, or active duty agreements so that contracts will expire as soon as possible after 20 years of active duty and in all cases before 22 years of active duty. Commanding officers are authorized to execute two-, three-, four-, or six-year enlistments of these men. Also COs may execute extensions of enlistments in yearly increments up to a total of four years. Further continuation on active duty will be in accordance with Category C below.

Category B — Those who have completed or will complete 20 years or more of active service by 26 Mar

1964 and whose present EAOS is within one year of 26 Mar 1963, who desire to be continued on active duty.

Individuals will submit requests for reenlistment, extension of enlistment, or extension of active duty agreement within 30 days from the date that BuPers Inst. 1133.16 is received. If the man's enlistment expires before Chief of Naval Personnel action on the request, the man may extend for one year or, if extensions already total four years, he may reenlist in the Navy for two years.

Category C — Those stewards who have already completed or who will complete 20 years of active service whose EAOS is one year or more from 26 Mar 1963 who desire to be continued on active duty in the naval service.

These men will submit requests for reenlistment, extension of enlistment, or extension of active duty agreement at least one year in advance of present EAOS.

Category D — Those men in Category B or C who require additional obligated service due to receipt of transfer orders or to establish Seavey eligibility, but who will have completed 20 or more years of active service on their present EAOS.

These men extend their enlistments for the minimum number of years that it takes to cover the period of required obligated service. Further continuation on active duty will be in accordance with Category B or C as appropriate.

Before a request is submitted to the Chief of Naval Personnel, the CO of the man submitting the request will order the man to be examined in accordance with Article 15-51(2), *Manual of the Medical Department*, to determine his physical fitness for assignment to sea duty. The CO will report the results of the examination, making comments on any defects which would affect the individual's performance of duties at sea.

The commanding officer will also complete the Performance Data Section of NavPers 1339 (Rev. 3-56), including block 13. His recommendation concerning reenlistment will be based on personal observation and the individual's performance of duty and his qualifications.

Scholarship Opportunities Are Available to Navy Juniors

IT HAS BEEN estimated that a college education means about \$100,000 in increased earning power during a person's lifetime. Further, in more and more lines of endeavor, an academic background is becoming more and more important. Without it, your children's future could be limited to dull and monotonous means of earning a living; with it, stimulating and challenging careers are more possible—at much better pay.

On the other hand, the costs of a college education are mounting rapidly and will continue to do so in the foreseeable future. The cost of going to college has doubled since 1940. At the present rise in prices, it will double again by 1970.

If you, like so many other Navy parents, are faced with this dilemma, you would do well to investigate the requirements in obtaining a scholarship or loan for your children who are hoping (and are qualified) to attend college.

Approximately 300,000 scholarships are awarded annually. Although the vast majority are available to the general public, a certain number are granted specifically to the children of naval personnel. Others are offered to children of military personnel of all services.

There are some 2000 four-year, two-year, junior and technical institutions of higher learning in the United States. Which will be best for your children?

To give you a little background, and to help you chart your course through these strange seas, the Personal Affairs Division of the Bureau of Naval Personnel has compiled a list of scholarships and institutions offering financial or other assistance to children of military and naval personnel. In addition, it has a few words of general advice to offer.

Families with incomes below \$8000 per year stand the best chance of obtaining awards based upon need. The lower the income, the higher the grant tends to be. An annual income of \$10,000 appears to be the cutoff level although this, of course, is not fixed. Extraordinary circumstances may alter cases.

Don't expect a scholarship to pay all expenses. Many scholarships specify that the money granted is to

be used for tuition only, and there are many more expenses connected with attending college. At the moment, about one of every five students in the U. S. is receiving help of some sort, but the average award, according to the latest figures available, was less than \$300 and provided less than five per cent of the total income of the group studied. These students earned about 25 per cent of their college expenses with summer jobs. You—or they—or a scholarship will have to supply the balance.

It is recommended that your son or daughter apply to only three colleges, preferably of different types. One should be a little too tough for him (or her), one about his normal intellectual speed, and one that is definitely safe. Geographically speaking, one should be in your city or state, one in the Midwest and one in New England or the Southwest. As far as numbers go, you might consider one that has an enrollment of less than 1000 if he is interested in a small college atmosphere; 5000 is considered intermediate; and if he is interested in "big" colleges, he might try one of the western or midwestern state institutions.

One further point before we get into the actual listing of scholarships: It is extremely important that you start early as almost all scholarships carry deadlines (usually in the spring, often as early as March) for receipt of applications. It's not too early to start investigating now if you have a child in high school.

The beginning of the senior year

in high school is best for deciding on the scholarships for which your child wants to compete. His high school principal or guidance counselor will be of help at this point. If you want to concentrate on a specific college or university, write to the Director of Admissions requesting a catalogue and mention your interest in obtaining a scholarship. As a rule, the catalogues list the number of scholarships available, their value and the requirements to be met.

Scholarships

Clausey Medal of Honor Scholarship Foundation—May be used in obtaining education or training at or beyond the college level. The award is an outright annual grant up to \$500. Qualifications:

- Awarded to the children of Navy or Marine Corps personnel who died in service or suffered disability incurred or aggravated during World War I, World War II, or the Korean conflict, but not officially recognized as such.

- Must be in need of financial assistance to further applicant's education.

- Applicant must be a graduate of an accredited high school or its equivalent, or one who will qualify for graduation before the beginning of the next academic year. Applicants already working at the college level or beyond automatically fulfill this requirement.

- Scholastic record at the high school level must be outstanding.

- Should be physically capable of completing the course and should be of good moral character.

Naval Academy Women's Club Scholarship — Awards a four-year scholarship annually, in the amount of \$1500, to be allocated as follows: \$500, freshman year; \$400, sophomore year; \$300 in both junior and senior years.

The recipient must be the daughter, adopted daughter or stepdaughter of a Naval Academy faculty member, a regular Navy or Marine Corps officer on active duty or in a retired status with pay, or the daughter of a deceased officer in one of the former categories.

The award will be made on the basis of scholarship, character and



"... And when did you first experience this feeling that you're just a nobody?"

need, and will be awarded for the four years of the recipient's college career.

These scholarships may be used to supplement other scholarships and their renewal is contingent only on the recipients' maintaining scholastic standards as well as on meeting other requirements on which original grant was made.

Navy Wives Clubs Scholarship Foundation — May be used in obtaining college education, vocational, business or other training. No amount is specified.

Qualifications:

- Must be the child, legally adopted child or stepchild of an enlisted member of the Navy, Marine Corps or Coast Guard, on active duty or retired with pay, or a child or stepchild of a deceased enlisted man of the listed categories.

- Must be in need of financial assistance.

- Must be a graduate of an accredited high school or its equivalent, or one who will qualify for graduation before the beginning of the next academic year. Applicants already working at the college level automatically fulfill this requirement.

- Scholastic standing must be reasonably sound.

- Should be physically capable of completing the course undertaken and should be of good moral character.

Marianas Officers' Wives' Club, Guam, Mariana Islands—An annual scholarship award of \$500 per year. This award will be used for education at or beyond the college level.

Qualifications:

- Must be a dependent of an officer or an enlisted man of the regular Navy or Marine Corps who is serving on active duty, retired with pay, or deceased in line of duty or after retirement.

- Must be a graduate or prospective graduate of an accredited high school or its equivalent. A student presently attending an accredited college may apply.

- Will be used for educational expenses at an accredited college for the following academic year. The grant may be renewed at the discretion of the Selection Committee.

- The grant may be awarded to

one individual or divided between two individuals.

Bainbridge Officers' Wives' Club Scholarship—Up to the present, an award of \$250 has been granted for education at the college level.

Qualifications:

- Must be a dependent of an officer or an enlisted man of the regular Navy or Marine Corps, who is serving on active duty, retired with pay, or deceased in line of duty or after retirement.

- Must be a graduate or prospective graduate from an accredited high school or its equivalent. A student presently attending an accredited college may apply.

- Other factors being equal, preference will be given to an applicant who is a dependent of a Navyman or Marine who is or has been stationed at the U. S. Naval Training Center, Bainbridge, Md.

- The scholarship will be used for educational expenses at an accredited college for the following academic year. The grant may be renewed.

The Society of Sponsors of the United States Navy—Awards annually to sons of deceased or retired Navy, Marine Corps, Army, Air Force, Coast Guard or sons of deceased civilians in need of financial assistance, one or more scholarships for one academic year to preparatory schools for the U. S. Naval Academy. Sons of Navy and Marine Corps personnel will have precedence over those of other services.

The applicant must be acceptable to the Scholarship Committee as to character, aptitude for the naval

service, scholastic standing and physical fitness.

Applications should be made to the Chairman of the Scholarship and Welfare Committee of the Society of Sponsors of the United States Navy, Mrs. George Weaver, 1600 S. Joyce Street, Arlington, Va.

The Jesse H. Jones Scholarship—Offers from \$100 to \$500 in any regular college year.

These scholarships are awarded to young men of outstanding ability who would otherwise be denied a college education or forced to suffer undue hardships in order to obtain it. They are chosen from the entering male freshmen students of Rice University and other male students of Rice University who have demonstrated ability and merit. To be considered for one of these awards the applicant must intend to train for a commission in the U. S. Navy. He also must be accepted as a member of the NROTC at Rice University.

This award will be made on a yearly basis with special consideration given to previous holders.

Daughters of the Cincinnati—Offer scholarships only for the daughters of regular Navy, Army, Air Force or Marine Corps officers. They are for college level only. Of the 15 scholarships offered, 10 are elective (i. e., the student may choose her college); three are at the College of William and Mary, Williamsburg, Va., and two are postgraduate scholarships to be used exclusively at Teacher's College, Columbia University, N. Y. No scholarship awards will be made after a student has entered college.

In addition, the applicant must:

- Have high scholastic record and submit transcript of recent grades.

- Have three letters of recommendation from teachers and one character reference.

- The parent of the applicant must submit statement of financial position showing need for financial aid.

- Application blank must be filed by February 1st for the following fall semester. It must be completed and small photograph attached.

In most cases, the \$700 annual scholarships are elective to a four-year college course in a college of good standing.

Application and other information



"That auto club is sure going to hear about those bad directions."

may be obtained from the Scholarship Secretary, Daughters of the Cincinnati, 953 Fifth St., New York 21, N. Y.

Culver Military Academy — Offers about 60 scholarships ranging from \$500 to \$1900, some of which are set aside specifically for sons of military personnel, both active and retired. The Academy is similar to a college preparatory school (grades eight through 12). Retired personnel interested in learning whether their sons are eligible should communicate directly with Major General Delmar T. Spivey, USAF (Retired), Superintendent, Culver Military Academy, Culver, Ind.

St. Paul's School, Concord, N. H., is an Episcopal boarding school for boys between the ages of 12 and 18. Admiral Nicoll Ludlow, usn, established a scholarship in 1916 in memory of his son, Nicoll Ludlow, Jr. The income is used to assist in the education of sons of commissioned officers of the U. S. Navy at St. Paul's. Application should be made to the Headmaster, St. Paul's School, Concord, N. H.

The Emma Willard School is a boarding school for girls between the ages of 12 and 19 and, in addition, operates a day school for girls between the ages of five and 19. There are some concessions made to a limited number of daughters of officers of the U. S. Navy. Two scholarships for daughters of officers of the U. S. Navy were established by the will of Admiral Nicoll Ludlow, usn. Application for these scholarships should be made to the Emma Willard School, Troy, N. Y.

Valley Forge Military Academy—Offers eight scholarships yearly to sons of regular officers of the armed forces having high academic standing and interested in military life. These scholarships are awarded for a three-year period in the amount of \$1015 per year, which is about half the tuition rate.

The applicant must be either a boy between 14 and 16 years of age preparing to enter the 10th grade who will continue at Valley Forge to receive his secondary school diploma, or a young man preparing to enter the 12th grade who will receive his secondary diploma and continue on for two years of junior college to receive a junior college Associate in

Arts diploma from the Academy.

Admission is by written examination. Applications should be directed to the Registrar, Valley Forge Military Academy, Wayne, Pa., by 15 June of the year in which the candidate plans to enter school.

Junior Army Navy Guild Organization (JANGO)—Offers a scholarship to be awarded annually to a Junior Jango. The applicant must:

- Return application completed by 1 April of college entry.
- Have high scholastic standing, and submit grades of past school year.
- Have letter of recommendation from one teacher, and three character references.
- Obtain letter of evaluation as Jango from Guild chairman.
- Parent of applicant must submit statement of financial position to establish need of assistance.

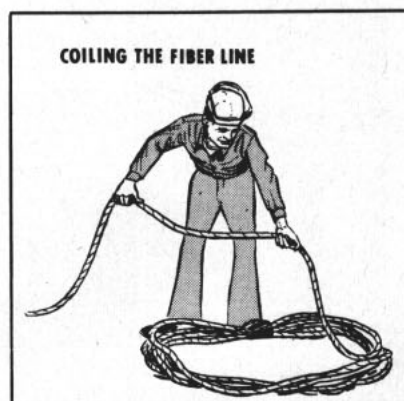
This scholarship is awarded in the spring of the student's senior high school year.

For further information write to the Scholarship Committee, 1112 20th Street, N. W., Washington, D. C.

St. Margaret's School, Tappahannock, Va.—Offers an annual tuition scholarship in the amount of \$325 on behalf of an entering freshman at the secondary school level who is the daughter of a member of the naval service (active, retired, or deceased). The requirements include ability to do the work, character and personality which would benefit by this school as well as evidence of need of scholarship.

Applications may be obtained from the officers of the Registrar of the School.

Grains of Salt—



Massachusetts Institute of Technology, Cambridge, Mass.—Sons of regular Army, Navy, Marine Corps and Coast Guard officers, who are admitted as undergraduate students to the Institute, may receive half the regular tuition upon the recommendation of the Faculty Committee on undergraduate scholarships, the total number not to exceed 10 each year.

Applications should be addressed to the Dean of Freshman and should be accompanied by documentary evidence that the applicant's father is a commissioned officer in the regular Army, Navy, Marine Corps or Coast Guard. Holders of these scholarships, if recommended by the Committee, may continue at the half tuition rate during their second and succeeding undergraduate years.

Mount Vernon Seminary and Junior College—Grants a reduction of 10 per cent in tuition fee, for both boarders and day scholars, to the daughters of officers and of widows of officers of the regular Navy, Marine Corps, Army, Air Force and Coast Guard.

For further information, write to the school, located at 2100 Foxhall Road, Washington, D. C.

The Grace Moore Brewer Memorial Scholarship—Established at the Medical College of Ohio State University; is awarded annually by the Dean of the College of Medicine, Ohio State University. The amount is determined by the earnings of the endowment fund when completed and at present it is \$1000.

Preference is given to a direct descendant of a veteran of WW I, WW II, or the Korean conflict.

The veteran must have been permanently disabled or lost his life as a result of this service.

The descendant or applicant must meet the requirements for admission to the College of Medicine, and must be in need of financial assistance.

The award commences with the pre-medical year and continues through medical college till the degree of M.D. is earned, provided the student is enrolled as a full-time student.

The recipient of the award must attend the Medical College of Ohio State University but he does not have to be a resident of Ohio.

The recipient is expected to specialize in the field of research or treatment of cancer until the disease

has been conquered by medical science. However, this is not a fixed requirement.

Disabled American Veterans Auxiliary—Has established a student loan fund, which is available to members of the Disabled American Veterans, its auxiliary and their children.

A maximum of \$200 per year is allowed, payable direct to the school. The type of school is not limited. The student is carried through the completion of his course, provided he retains his scholastic standing.

The loan is repaid after graduation, or upon leaving school, in monthly installments. No interest is charged. Applications should be made to the National Educational Loan Fund Chairman, Mrs. Eunice Bluestein, 130 63rd Street, South St. Petersburg 7, Fla., or to National Headquarters, Disabled American Veterans Auxiliary, 220 East Washington, Colorado Springs, Colo.

American Legion Auxiliary Scholarship Fund—Scholarships in varying amounts up to \$3000 for daughters and sons of honorably discharged World War veterans who have lived in Florida at least five years before application. Apply to Department Secretary-Treasurer, Box 4573, Jacksonville, Fla.

AMVETS Memorial Scholarships — Are available to high school seniors whose fathers (or mothers) are deceased or totally disabled veterans of military service during World War II or the Korean conflict. Service must have been honorable and with the U. S. armed forces. Death need not have been service-connected; disability, however, must be service-connected and rated 100 per cent by the Veterans Administration. Scholarships provide financial assistance for undergraduate study at any accredited college. The grants range from a minimum of \$500 to a maximum of \$2000 for four years.

Selection is based upon competitive college aptitude examination given in applicant's high school; high school records; financial need.

Application forms are available during January and February from any AMVETS Post or National Service Officer of AMVETS National Headquarters, P. O. Box 6038, Mid-City Station, Washington 25, D. C. Deadline for receipt of your scholarship applications is February 20.

A limited number of fellowships are available for graduate study. The fellowships provide \$500 and will be granted on the basis of the students' undergraduate college records.

Maud E. Warwick Fund—Considers applications for scholarships from orphans of World War II who are not eligible for assistance under the War Orphans Education Assistance Act and also from those whose financial needs exceed the amount provided by the federal government under the Act.

Scholarships will be granted to assist studies carried on in colleges and universities, technical professional and graduate schools and also will be available for advanced study of music and other arts and crafts. Scholarships are also available for the assistance of graduate students.

Young men and women made orphans by World War II, who are citizens of the United States, may apply. An applicant must be the son or daughter of a parent who died as a citizen of the United States while serving in its forces or in its Merchant Marine or who otherwise died as a result of World War II.

The amount of the scholarships will be adjusted to the needs of each scholar. There is no prohibition against receiving a Maud E. Warwick scholarship while he holds other scholarship assistance.

For further information write to Mrs. Helen M. Dougherty, Secretary, Maud E. Warwick Fund for War Orphans, Inc., 54 Morningside Drive, New York 25, N. Y.

Burmese American Memorial Fund — Provides financial assistance to further the education of the children whose parent served in the United States armed forces in Burma during World War II. Benefits will not exceed \$400 per year up to four years.

Preference will be given to applicants in the following order:

- One whose parent died in service, or from service-connected causes.

- One whose parent is disabled due to service connection.

To be eligible:

- The applicant must have a high school education or its equivalent and be enrolled in or eligible for entry into the institution of his choice.

- The educational institution

The Navy uniform is a symbol. In the United States, both you and the sea service are judged by its appearance. And in a foreign port, our country's image is reflected by the way it is worn.

You probably received a briefing concerning the care of your uniform while you were in boot camp, but just in case that period is some time behind you, here are a few questions that may refresh your memory on uniform care.

1. After washing, woolen materials should be (a) put through a wringer, (b) twisted dry, (c) centrifugally dried or squeezed gently to remove surplus water and then dried in open air.

2. Food stains may be removed by (a) sponging thoroughly with cold water, allowing the material to dry, and then sponging with naphtha, chloroform, or benzine, (b) sponging with warm, soapy water, (c) soaking in ammonia.

3. To remove dried blood, the material should be (a) soaked in naphtha, (b) brushed with a dry brush, and



soaked in cold water for about an hour, followed by regular washing, (c) soaked in turpentine.

4. Light singe marks on blue uniforms may be removed by (a) rubbing vigorously with the flat side of a silver coin, (b) scrubbing with ammonia, (c) sponging with naphtha.

5. Fresh mildew stains may be removed with cold water. If the material is white cotton and the stains are old, they may be removed by sponging with benzine, (b) soaking in acetone, (c) bleaching.

6. Kerosene stains may be taken out by (a) washing in a solution of warm, soapy water, (b) soaking in cold water, (c) sponging with benzine. Answers to Quiz Aweigh may be found on page 54.

chosen must be recognized by the state in which it is located.

- A satisfactory academic record must be maintained for annual reconsideration of an award.

Obtain complete details by writing to the American Legion Child Welfare Foundation, Inc., Attn: Scholarship Information Service, Box 1055, Indianapolis 6, Ind. Applications deadline date: 15 February previous to the fall of college entrance.

Knights of Columbus — Maintains a \$1,000,000 educational trust fund as a memorial to members of the Order.

Scholarships are for four years and include allowances for tuition, board and room, books, laboratory fees and other incidental charges at a Catholic college or university. In addition, many state and local councils of the Knights of Columbus have scholarship programs with varying eligibility requirements and benefits.

Scholarships are available to the sons and daughters of Knights who were killed or became totally or permanently disabled as the result of military service during World War II or the Korean conflict.

Further details may be obtained from local or state councils of the Knights of Columbus, or by writing to Joseph F. Lamb, Supreme Secretary, Knights of Columbus, Drawer 1670, New Haven, Conn.

Armed Forces Relief and Benefits Association — From two to 10 self-aid scholarship grants, of \$500 each, will be granted each year.

Applications may be made in behalf of sons and daughters of members who are already attending or are about to enter a college or university. The recipient of a scholarship grant may choose his or her college or university. These are one-year, self-aid scholarship grants and are not necessarily payable beyond a single year.

Apply to: Armed Forces Relief and Benefits Association, Room 936-947 Warner Building, 13th and E Streets, N. W., Washington 4, D. C.

Daughters of Union Veterans of the Civil War — Offers a scholarship program with funds made available to six colleges and universities.

Eligibility: Recipient must be a lineal descendant of a Union veteran of the Civil War. Satisfactory scholastic standing. Good moral character, having a firm belief in our

Grains of Salt—

FAKING DOWN THE FIBER LINE



form of government and no subversive tendencies. A member of the sophomore, junior, or senior class in college. Money advanced to a student from this loan is secured by a promissory note with interest at one per cent per annum. Interest starts on date the student leaves school.

Retired Officers Associations Scholarship Program — Offers an honor loan, interest-free, not to exceed \$400 yearly for four years made to help defray expenses in institutions of higher education.

Loans will be authorized on a basis of character, scholastic aptitude and financial need.

The following is required:

For first year students, a transcript of the candidate's high school record, together with a statement that he or she is accepted for and qualified to pursue college or university work at the institution selected. For following years, a transcript of the candidate's record for the year preceding her or his application.

A statement to the effect that he or she is without adequate means to

engage in higher education, supported by a separate statement from the parent or guardian that the latter is unable, without hardship, to provide the necessary expenses.

Character references from at least two reputable persons.

An assurance that the candidate will sign a statement promising to repay in full, but without interest, any loan, as soon as possible after graduation.

Specific questions will be answered by John D. Murphy, Secretary, Scholarship Committee, 1616 Eye Street, N. W., Washington, D. C.

American Legion — Individual posts and units of the Auxiliary offer educational aids for the benefit of children of their communities. More detailed information may be obtained from the American Legion and Auxiliary Post, Unit and Department in your home town. A few specific American Legion educational programs are listed below:

- **National High School Oratorical Contest.** The four finalists receive scholarships which may be used to attend any college or university in the United States — the winner, \$4000; the runner-up, \$2500; third place, \$1000; and fourth place, \$500. It is estimated that there are several hundred scholarships for oratorical contest participants awarded at post, district and state levels. Rules can be obtained from principals in those schools which participate in the contest, or from the local Legion post, or from the state department headquarters of the American Legion.

- **National President's Scholarships** of \$600 each are awarded annually, two in each of five divisions. Candidates must be girls who: Are children of deceased veterans who served in World War I, World War II or the Korean conflict; are in their senior year or are graduates of an accredited high school, but have not yet attended an institution of higher learning; and are in actual need of help to continue their education. Further information and applications may be secured from the education and scholarship chairman of the Auxiliary unit in the applicant's own community or from the Department Secretary.

- **The Forty and Eight Nurses**

QUIZ AWEIGH ANSWERS

Quiz Aweigh may be found on page 53.

1. (c) centrifugally dried or squeezed gently to remove surplus water and then dried in open air.
2. (a) Sponging thoroughly with cold water, allowing the material to dry, and then sponging with naphtha, chloroform, or benzine.
3. (b) Brushed with a dry brush, and soaked in cold water for about an hour, followed by regular washing.
4. (a) Rubbing vigorously with the flat side of a silver coin.
5. (c) Bleaching.
6. (a) Washing in a solution of warm, soapy water.

Training Program sponsors a program of nurses' training through its local units.

• **The Eight and Forty Tuberculosis Nursing Scholarship Fund** assists nurses to secure advanced preparation for positions in either supervision, administration or teaching. Scholarship awards are \$1000 each. Application forms may be obtained from the American Legion Education and Scholarship Committee, Box 1055, Indianapolis 6, Ind.

Girard College of Philadelphia — Offers complete maintenance and education through elementary and high school, and assumes all costs of the boy's care during his student days, with the exception of his holidays and vacations at home.

To be eligible, students must have passed their sixth birthday, and not have reached their 10th, and their fathers must be deceased. They should be physically sound, show promise of satisfactory scholastic performance, and be able to fit into group social life.

Inquiries should be addressed to: Director of Admissions and Student Relations, Girard College, Philadelphia 21, Pa.

Dolphin Scholarship — The Submarine Officer's Wives Clubs will award five tuition scholarships annually in the sum of \$420.

The recipient must be a son or daughter (natural, adopted or step-child) of a member of the submarine service, who has served a minimum of five years following qualification in the Submarine Force, or who has died on active duty.

Awards are to be given on the basis of scholastic proficiency, character, all-around ability and financial need. The scholarship may be used to supplement other scholarships.

The applicant must be a graduate of an accredited high school, or its equivalent, and intend to work toward a BS or BA degree.

Application forms may be obtained from the Bureau of Naval Personnel, Pers G221, Washington 25, D. C.

Submarine Veterans of World War II — Offers annual scholarship awards in the amount of \$350 each to sons and daughters of submarine personnel (officer or enlisted) lost in a U. S. submarine during WW II.

The recipient must meet high

scholastic standards and present evidence of need.

Applicants must be secondary school seniors or have graduated from school within a year before the date of application. He or she must be unmarried; never have been married; and the widowed mother must not have remarried.

The applicant must plan on studying toward receiving a BA or BS degree.

Application forms may be obtained from Submarine Veteran chapter presidents, commanders, or from Pers G221, Bureau of Naval Personnel, Navy Department, Washington 25, D. C.

Bermuda Officers' Wives' Club — Offers a \$250 scholarship award during 1964-65 to be used for education at the college level of an applicant considered most worthy on the basis of scholastic standing, character, leadership and need.

The applicant must be a dependent of an officer or an enlisted man of the regular Navy, Marine Corps, or Coast Guard, who is serving on active duty, retired with pay, or deceased in line of duty or after retirement.

Preference will be given to an applicant who is a dependent of military personnel who is or has been stationed at the U. S. Naval Station, Bermuda, or at one of its tenant activities.

The applicant must be a graduate or prospective graduate of an accredited high school or its equivalent. A student presently attending an accredited college may apply.

Application forms may be obtained from Pers G221, Bureau of Naval Personnel, Navy Department, Washington 25, D. C.

The Fleet Reserve Association will award \$500 annually to the son or daughter of a member of the Fleet Reserve Association in good standing as of 1 April of the year the award is made. There will be one award only, to be used for the education at the college level of the applicant considered most worthy on the basis of need, scholastic standing, character and leadership.

Qualifications:

• The applicant must be the dependent son or daughter of a member of the Fleet Reserve Association, deceased, active, or entitled to re-

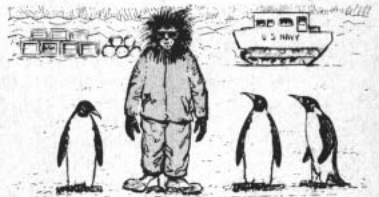
For the 600 Navymen in Antarctica, clothing has only one function—to keep them warm.

Clothingwise, the best method for keeping warm yet devised is to provide a dead air space of up to one-half inch thickness next to the skin. Deep Freeze men accomplish this through the use of waffleweave underwear—thickly woven cotton mesh.

It weighs less than close-knit long handle woolen underwear, is easier to dry, doesn't shrink or irritate the skin.

Further insulation from the cold is provided by a wool shirt and pants and a parka and parka pants outfit of wind-proof cloth. This is designed along Eskimo lines and is about as enveloping as a deep-sea diver's suit. It is lined with synthetic wool pile fur on shrink-proof nylon base cloth. All but the hood portion of the parka outfit is equipped with cotton fishnet on nylon fleece to provide further insulating dead air space.

For normal mid-summer weather in Antarctica, a man can get by with a



blue stocking watch cap or any other type hat which has ear protection, provided he wears it under a windproof parka hood.

Pigskin driving gloves are often sufficient to keep a man's hands warm during normal summer seasons at coastal stations.

Feet are the trouble spot in the Antarctic clothing picture, for there is no universally satisfactory boot for all cold-weather conditions.

Thermal boots with a double-rubber insulated vapor barrier keep the feet warm at temperatures down to minus 60 degrees, provided the wearer moves about a little. They are worn with cushion-sole socks.

Under some conditions, however, perspiration becomes a problem and, if a man can't change to dry socks every few hours, he is liable to have painfully hot feet—a condition known to World War I doughboys as trenchfoot.

Obviously, the men of Deep Freeze don't have much need for the sort of fancy resort wear seen on the male models who are surrounded by bathing beauties in the magazine advertisements.

However, they would certainly appreciate being surrounded by bathing beauties.

tainer or retired pay.

- The applicant must be a graduate or prospective graduate from an accredited high school or its equivalent. A student now attending an accredited college may apply if he or she has not previously received this award.

- The scholarship must be used for educational expenses at an accredited college for the academic year.

The Ladies Auxiliary of the Fleet Reserve Association offers an annual \$250 scholarship to be administered by the Chief of Naval Personnel.

The recipient must be chosen from daughters of naval and Marine Corps personnel, active, Fleet Reserve, retired with pay, or deceased.

Application forms may be obtained from Pers G221, Bureau of Naval Personnel, Navy Department, Washington 25, D. C., and must be submitted to that office not later than 15 April.

The U. S. Submarine Veterans of World War II have established a \$350 annual scholarship award (or awards) on behalf of sons and daughters of submarine personnel (officer or enlisted) lost in a U. S. submarine during World War II.

The recipient must meet high scholastic standards and present evidence of need.

Applicants must be secondary school seniors or have graduated no more than a year before the date of application. He or she must be unmarried; never have been married; and the widowed mother must not have remarried.

The award may be used for tuition in an accredited college or junior college, but the applicant must plan on studying toward a BA or BS degree.

Application forms may be obtained from Submarine Veteran Chapter presidents, commanders, or from Pers G221, Bureau of Naval Personnel, Navy Department, Washington 25, D. C. Applications must be submitted to the latter office not later than 15 April.

Levin M. Powell Scholarships, established in 1886, are full-tuition scholarships, and are available annually to young men wishing to prepare for entrance into the United States Naval Academy. These scholarships are open to incoming fresh-

men; they are awarded to outstanding members of graduating classes or accredited secondary schools.

Applicants must apply for admission to the George Washington University and must be accepted before their scholarship applications can be considered. Forms for admission are available at the Office of the Director of Admissions, The George Washington University, Washington 6, D. C.

The scholarship holder must carry a full schedule of academic work during the period for which the scholarship is awarded. Awards are made in April, and begin with the fall semester.

Application should be addressed to the Chairman of the Committee on Scholarships, The George Washington University, Washington 6, D. C.

The Defense Supply Association's New York chapter has established an annual \$500 college scholarship award for children of military personnel in the New York area.

Sons and daughters of active, retired or deceased members (officers or enlisted) of the military establishment in the New York City area, extending into New Jersey as far as Fort Dix and upstate New York as far as Stewart Air Force Base in Newburgh are eligible. The area also includes all of Long Island and Fairfield county, Conn.

Besides scholastic standing, other criteria of selection will include leadership qualities and financial need. It is anticipated that the award will be made to a high school student entering college.

SPACERS



"... and he wishes to lodge a complaint on our last space shot, Sir."

Applications may be made by writing to: Scholarship Committee, Defense Supply Association, New York Chapter, 261 Madison Ave., New York 16, N. Y.

There are, of course, many, many other scholarships available which do not require a naval or military background. A list of some of these which may be of special interest to you; a discussion of the War Orphans' Educational Assistance Act; and a list of military academies offering scholarships, will be presented in a future issue of ALL HANDS.

BuPers Manual Revises Rules On Closed-Out Service Records

A recent change to the *BuPers Manual* (Change #9) clears up a slight point of conflict concerning the sending of closed-out service records to BuPers.

Article B-2308(4) of the *Manual*, which spells out the procedure for disposing of closed out records, has noted that service records forwarded to the Bureau should be accompanied by letters of transmittal.

However, Article C-10408 of the same manual said that "Letters of transmittal are no longer required when forwarding separation documents to the Bureau."

To eliminate this conflict, Change No. 9 rewords article B-2308(4), deleting the letter of transmittal requirement.

Six Correspondence Courses for Officers and EMs:

The Naval Correspondence Course Center has made available six new correspondence courses, three officer and three enlisted. Three courses, *Military Sea Transportation* (NavPers 10972-A), *Navy Organization for National Security* (NavPers 10721) and *Aviation Storekeeper 1 and C* (NavPers 91675-A) have been discontinued.

The new courses are:

Course	NavPers No.
OCC Military Sea Transportation Service	10972-B
OCC Office of the Judge Advocate General	10723
OCC Navy Organization for National Security	10721-A
ECC Communications Technician A 1 and C	91560
ECC Photographic Intelligenceman 3 and 2	91592
ECC Aviation Storekeeper 1 and C	91675-1

BOOKS

LOTS OF VARIETY OFFERED THIS MONTH

EVERYONE HAS HIS OWN way of telling a story, and reading a new version of the same story—even if it's about a topic which has been rehashed many times—can be enjoyable and enlightening when the new version is authoritative and well written. Such is the case with four of this month's selections—two that take different viewpoints of the war in the Pacific, and two about the Civil War. Other selections delve into such significant topics as military science, exploration of the sea and of the earth itself, and the possibilities of a very new offensive military "weapon."

The first two are *Triumph in the Pacific*, by E. B. Potter and Fleet Admiral Chester W. Nimitz, USN, and *Pacific War Diary 1942-1945*, by James J. Fahey.

Triumph, adapted from *Sea Power*, an earlier and more extensive Potter and Nimitz work, is a narrative of the achievements, defeats and victories of both the American and Japanese navies as they met and battled in the greatest war of all time. It brings to life the decisive encounters at Midway, Guadalcanal, the Philippine Sea, Leyte Gulf, Iwo Jima, Okinawa and the other points in the Pacific where history was made from 1941 to 1945. The book is an objective, well-documented report, ingrained with the accuracy which results from years of painstaking research and preparation. The editors are highly qualified to perform such a documentation—Potter, as Chairman of Naval History at the Naval Academy, and the venerable Nimitz who, as Commander in Chief, Pacific Fleet and Pacific Ocean Areas, was a principal figure in the conflict. The lucid charts and diagrams which illustrate the book are alone worthy of an evening's study.

From this report we slide down the chain of command to the report by Seaman First Class James J. Fahey called *Pacific War Diary*. Here is war as it appeared to nine out of 10 Americans who wore a naval uniform in the great struggle. Not the high command's strategy, not the admirals' tactics nor the officers' commands, not the reporters' observations, but the seaman's-eye view—watches, scuttlebutt, weather, battle stations, working parties, the daily

fare—and then the grim business of battles and invasions. One page may overflow with nostalgia, while the next contains graphic descriptions of naval warfare. He tells us, too, of the fun and the gripes, of the wonder of strange islands where monkeys squeak, of members of the crew, of foreign people and the lands they live in, of the monotony and the violent action of the war years.

For our two new angles on the Civil War we have selected *Two Roads to Sumter* by William and Bruce Catton, and *An End to Bugling* by Edmund G. Love, the latter being a tricky piece of fiction.

Two Roads, which supplements many of Bruce Catton's earlier Civil War volumes (*The Coming Fury*, *Terrible Swift Sword*, etc.), is a father-son Catton book dealing with the conflicts—personal and political—that preceded the outbreak of the Civil War. Parallel to this long view, the book also examines the development, and the hardening, of the attitudes of Abraham Lincoln and Jefferson Davis. The Cattons have examined Lincoln and Davis during this period not only because they became the war leaders of the next decade, but also because they represented thoughtful, moderate opinion in America at the time.

An End to Bugling is a short but sharp—and sometimes hilarious—novel in which the cavalry of the Army of Northern Virginia, Confederate States of America, returns in June 1963 to celebrate the centennial and re-enact the march from Rowser's Ford to the environs of Gettysburg. General Stuart, his weary horsemen and his loyal aides confront an amazed citizenry, confound a dumbfounded modern world, confuse today's traffic, and collect every type of law enforcement officer in repeating their earlier progress. What happens will arouse and regale devout students as well as those who have had more than enough Civil War-itis.

From the Civil War, we return to the high seas and make appropriate mention of *Amphibious Operations* by thriller writer and historian Arch Whitehouse. This penetrating history of amphibious operations examines the extraordinary displays of in-

genuity and valor connected with such enterprises, and documents the development of specialized equipment and new and unusual military techniques through the years. Illustrating his text with photographs and maps, Whitehouse describes this military science with his usual adroitness and skill, relating both famous and forgotten engagements—Greek sea operations; Caesar's invasion of Britain; Japan's attacks against Korea in 1592 and 1598; and World War II, with the Normandy invasion and the U. S. landing on Okinawa. This is a thrilling book, full of individual heroism, mass attacks, strategy and fantastic weapons.

Leaving the invasion beach, we strap on our aqua-lungs and go underwater for some more thrilling adventures with Captain Jaques-Yves Cousteau in *The Living Sea*. In the decade since publication of *The Silent World*, Captain Cousteau has gone farther and deeper into the sea, using his famous oceanographic ship *Calypso* as a mobile base, and employing a dazzling array of new depth-exploring techniques and devices. This book is his narrative of this exciting progress, complete with color and black and white photographs. Cousteau and his professional diving team excavate a ship which sank in the third century B.C. Cousteau goes down to the bottom of the sea in the bathyscaph—and starts an undersea avalanche which engulfs the vessel. He drinks wine from a jar that has lain on the sea bottom for 2000 years; he is entrapped at night by 25-foot seaweed. The undersea explorer's life is visited by pain and tragedy; it is also marked by moments of rare beauty in the undreamed-of splendor of the world below the sea, and it's all described in this book.

Two final selections this month are as diverse as they are interesting and entertaining. In *A Planet Called Earth*, the noted scientist Dr. George Ganow reflects the latest findings and theories about the life of our world, from its birth billions of years ago to death in the distant future.

And, on the fiction side, *Penelope*, by William C. Anderson, is the chuckle-filled story of a dolphin secretly taught to talk by an Air Force medical researcher. Penelope's possibilities are endless, and she eventually becomes a top-secret project. This is rollicking fantasy based on the new frontier of science today.

USS MARBLEHEAD (CL 12)

The Ship that Wouldn't Give Up



ALL HANDS SPECIAL SUPPLEMENT

This is the story of USS Marblehead (CL 12), the ship that wouldn't give up. The seas were surging through a hole in her bow, her steering gear was completely disabled, she was afire fore and aft, and her decks were covered with dead and wounded, fuel oil, debris and wreckage, but Marblehead lived to fight another day because of superb damage control and because her crew refused to accept defeat.

It happened during the early, dark days of World War II. The Japanese had marked off the elderly cruiser as sunk when she was 12 feet down by the bow and steaming in circles. However, officers and men battled fires, bailed water by hand for 48 hours, and, steering first by the starboard and then the port engine, made their way at a snail's pace through reef-studded straits in darkness and rain to precarious safety.

Previously, the Dutch cruiser Tromp approached Marblehead several times to take off survivors, but was waved off.

Forty-eight hours later, Marblehead limped into Tjilatjap, Java, having put out two fires, kept her pumps and bucket-brigade going continuously to keep from swamping, and successfully dodged Japanese scouting planes.

Temporary repairs were made at Tjilatjap in a small drydock that could lift only one end of the ship at a time. The stern could not be lifted clear, making it impossible to repair the jammed rudder, nor could the cruiser be completely emptied of water or made watertight. But so great was the danger of the ship being

bombed in the drydock that she put to sea again as soon as the worst leaks had been repaired.

Then began a trip that was to last 48 days and cover more than 9000 miles—from the southwest Pacific around the southern tip of Africa, and finally to New York.

Two years later, Marblehead was off the southern coast of France. For three days, her bombardment of beaches in the vicinity of St. Raphael played a part in clearing the way for assault landings.

This is the story of her adventures, as seen by CDR William B. Goggins, executive officer. The date is 4 Feb 1942, at the height of an attack by Japanese planes in the Java Sea.

I DO NOT RECALL how many attacks came over, but each time they came there would be a salvo of bombs dropped. We were doing quite well; the Captain was avoiding the salvos and everything looked pretty good to us down below (CDR Goggins was stationed in the wardroom, supervising an ammunition party). We could hear the cheers on deck when planes were shot down. I understand that three Japanese planes were shot down by our AA battery. One plane which tried to make a suicide landing on the ship was cut to pieces by the .50 caliber machinegun when it came close enough to hit. It crashed in the water and exploded not very far from the ship.

Then the ship was shaken, apparently by a hit astern and I just started to go forward and up the hatch to find out what the trouble was when the lights went out

and there was a terrific explosion. My sensation was that the whole after end of the ship was coming right at me.

The wardroom was immediately full of wreckage. I could not see very well because the light had gone out. I was standing about six feet from the forward door of the wardroom and I saw that I was almost completely surrounded by wreckage.

APPARENTLY I had not been hit, but I could feel an intense heat from the flash of the bomb. I was standing in the hot gas from the explosion and I could feel myself burning. The heat was so intense that the bulkheads, the paint on the metal and the linoleum were sizzling and catching fire. Whenever this hot gas remains in contact and is not blown away it ignites anything that will burn. My clothes did not catch fire, but I was severely burned.

A signalman by the name of Murtch was between me and the forward starboard door of the wardroom. The door was piled high with debris, but there was a small space above it through which we climbed. Murtch climbed through and I followed him and went up on deck.

There was by this time a good fire burning in the wardroom and, below, steam was escaping from some pipes that had been cut. All the lights forward were out and the party which had been working on the ammunition apparently started up on deck, taking with them the wounded.

I climbed up to the bridge and found that the captain was all right. The rudder indicator showed that the rudder was jammed full left, and he said that he had no steering control. The bomb had hit in the sick bay and had cut off all intercommunications and ship control forward. The ship was circling and the ships around us were keeping clear. They were also circling and were firing at the planes overhead.

I WENT DOWN the ladder to the main deck and started aft to find out what the difficulty was with the steering. I could see a number of wounded, mostly burns, being taken aft; some of them were lying on the main deck. I recall particularly one of the boys lying there who appeared to be in a pitiful condition, but there wasn't anything that could be done for him at the time.

The people who were on the damage control were already starting on the fire forward so I went aft on the deck. Someone asked me what was the matter with my neck and I then learned that a piece of shrapnel had clipped the back of my neck and that blood was running down my uniform.

I said, "I'm all right" but I can see that I had been pretty badly burned—I had second degree burns, I found afterwards, and my skin was burned and hanging in folds on my arms and legs. I had been burned in all areas not covered by my clothing. Other men who had been burned or wounded were being taken aft, the forward dressing station having been abandoned.

I went back on the main deck and I could see the hole the bomb hit forward. It had hit the bilge of the motor launch on the starboard side and had dropped down through leaving a hole which looked about one foot in diameter in the weather deck and there was a lot

of steam, smoke and flame coming up No. 1 hatch. I can recall this particularly because the flame and smoke was hot and burned me as I went by.

THE ANTI-AIRCRAFT BATTERY was intact and was still firing and apparently doing all right.

I found we had been hit on the stern somewhere and I climbed up to Battle Two to see if I could get communication with the steering gear. There was no answer and I afterwards learned that the people down there had all been killed.

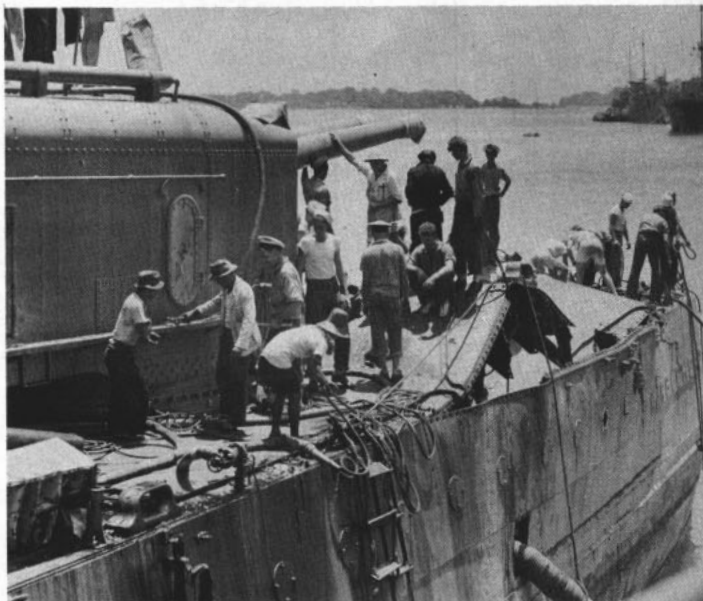
A bomb had hit the stern just abaft the after twin and had penetrated down into the steering gear and wrecked it.

I climbed down to Battle Two and went down the

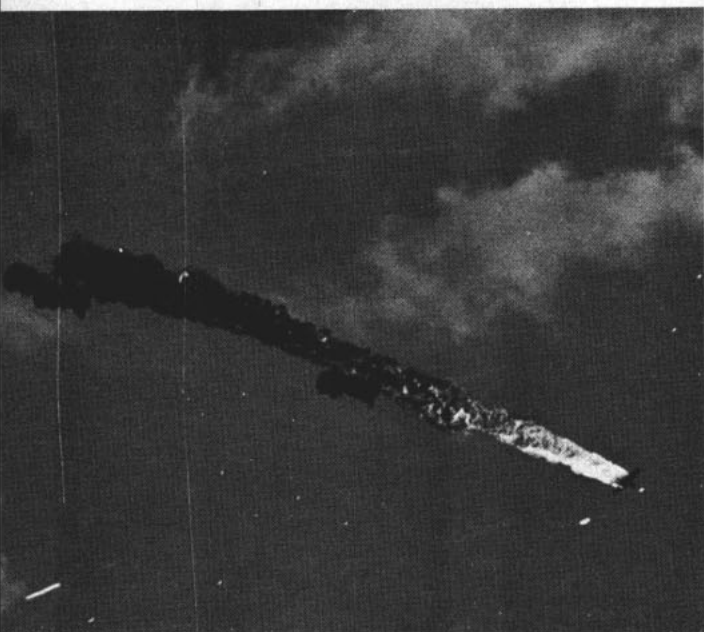
NEAR MISS forward on the port side put large number of holes in the bottom causing the ship to sink forward.



STERN JOB — Direct bomb hit on the after deck left the stern of the cruiser *Marblehead* in this condition.



This material is taken from original documents in the possession of the Division of Naval History, and made available to ALL HANDS by the Director, RADM E. M. Eller, USN (Ret.).



CHEERS went up every time an enemy plane went down. Marblehead's AA battery accounted for three of them.

No. 3 hatch to find out if anything could be done about steering. I got down to the foot of the ladder and found Dr. Ryan there with his people dressing wounded as best they could. He started to put some tannic acid jelly on my leg, but it appeared to me that there were many others who needed aid worse than I did, especially some who had some severe wounds from shrapnel and really required his attention.

I went back and found that the fire party was starting down the escape hatch and were attempting to put out a large fire which was then burning in the after end of the ship in the chiefs' quarters.

The bomb had blown the whole chiefs' quarters forward into the after engineering compartment. Having found that this damage would have to be corrected before anything could be done, I started forward again.

The crew was taking care of the damage. The damage control people and others were already hard at work and it was with the greatest calmness and determination. I saw no one who was excited. I saw no one who was raising his voice or shouting. Our drills had stressed the necessity for silence during emergency drills of all kinds and they were carrying it out during the actual battle. Everywhere I saw men and officers were proceeding to correct damage and to care for those who needed assistance.

I WENT FORWARD again and up to the bridge and reported what had happened aft as near as I could tell. The captain ordered me to go below and lie down, so I went down the ladder from the bridge one level to the conning tower, which was near enough to the bridge so that if I were needed I might be able to render some assistance.

I was outside the conning tower when the forward damage control party from central came up on deck. There had been a near miss close aboard on the port side right under the IC room, which had flooded that compartment and it was flooding central and other adjacent compartments. The people in central tried to

come up through the regular hatch but were unable to do so because of the fire burning over their heads. Accordingly they abandoned central through the leg of the tripod mast, which leads from there up into the chart house.

This tube is large enough for easy transit, except that it is now pretty well filled with voice tubes and wiring of one kind or another. Some people didn't think they could get up through there, but they all did. The last one to leave was the ship's tailor, who was a member of the party, a man by the name of Delugh, who had been on the ship from the time it was commissioned. Delugh was a man who was rather fat and it was not thought that he could get through this escape hatch at all, so Delugh told everybody to go ahead of him so that if he got stuck he wouldn't trap anybody below. I saw them all outside the conning tower just before I entered it and Delugh managed to get up all right, although with some abrasions. They were all in good shape and immediately went about their business to correct damage.

My burns were beginning to become very painful and I trimmed off about two inches of my sleeves and trousers in order to keep them from rubbing on the burned areas. Murtch, the signalman, who had been in the wardroom with me, came down with a little can of gun grease and said that while it wasn't quite the thing to put on burns, at least it would keep the air off and wouldn't hurt. So I rubbed the grease over all my burns and the pain stopped considerably and I was much more comfortable.

AT THIS TIME the ship was steaming at about full speed, about 28 knots, with the rudder jammed hard left and listed over, with the Japanese circling overhead trying to make another attack. I don't recall much about what happened, except that there was some shooting and we were not hit again.

We continued to circle for some time and in the afternoon I learned that they had been able to get the fire out over the steering gear and get down there to work at it.

It was impossible to get through the hatch into the engine room because it was jammed shut so it was necessary to cut a hole in the deck with torches and go down that way. They told me that they cut oil lines to the water bearing gear in order to get the pressure off the rams and get the rudder amidships. It is impossible to steer a ship of the *Marblehead* type with the engines alone, unless you can get the rudder amidships.

After this had been done we were able to have some control.

In the meantime, damage control had rigged a sound power line from the bridge to the engine room so that it would be possible to control the engines. During this entire period until this had been done the ship continued to circle with no control of any kind and I remember looking up at the halyards and seeing an emergency signal flying that the ship was out of control.

As soon as we had steering control, we left and headed south. It was not possible to go to Soerabaja because the Japanese were bombing there every day around noon and the ship might get hit again. We headed off down through Lombok Strait at high speed with two of our destroyers, *Stewart* (DD 224) and *John D. Edwards* (DD 216), escorting us—just in case.

DURING THIS PERIOD all hands were correcting damage and the antiaircraft battery was standing by ready to shoot again in case the enemy came back. The fires were eventually under control and the ship became more or less manageable.

As a result of the attack, there were, as I recall, 15 killed and around 30-odd wounded.

I did see the main deck of the ship and the condition there was indescribable. The blast of the bomb had showered fragments the entire length of the deck, the hot gas had burned people from the vicinity of the explosion all the way back to the No. 3 hatch.

People who were under No. 2 hatch were burned and hit by fragments which had come down the main deck about 100 feet and turned the corner and hit them. All the clothing lockers of the men had been exploded open and all the clothes thrown out on the deck and burned.

The safe in the post office, which was in the vicinity of the explosion, had been blown open. There is a safe forward of the wardroom under the hatch which was about 10 feet away from me, that had been blown open also and the contents dumped out on the deck.

All that afternoon and night the correction of damage continued, the details of which I do not know because I was in the conning tower and was becoming more and more helpless. I found that I was getting stiff, couldn't move.

During the night a number of other people stayed in the conning tower, the forward part of the ship having become flooded. All the officers' rooms in the lower level were flooded with oil and water so they had no place to sleep. Quite a number of people were sleeping in other locations, that is, those who did sleep.

The doctor was back and forth to the wounded all night long, but he would come and stay for a little while in the conning tower.

THAT NIGHT WE CONTINUED to steam at high speed down through Lombok Strait, the idea being to go to the westward to Tjilatjap, a port on the south coast of Java where there were some repair facilities and which had not yet been bombed by the Japanese.

The next day we had air defense sounded again. Apparently Japanese reconnaissance was over us, but no bombers showed up.

The ship was in such a condition that I doubt if we could have withstood another hit and our steering control was not very good; it was obvious that we would not be able to maneuver as radically as would be required. All night and the next day and the following night and day the ship was controlled by orders given over the sound power line to the forward engine room—one third ahead on one engine and full speed ahead on the other engine and so forth, to keep the ship on some reasonable course. One of the destroyer captains told me later that she certainly steered wildly going down through that strait. He had quite a time to keep clear of her because in the darkness she would suddenly veer over and head for him and he would have to give her everything he had to get clear.

We had no gyro left and the magnetic compass was well out due to the bombing, so the course was judged pretty much by the destroyer steering.

The near miss forward on the port side had put a large number of relatively small holes and one very large one (about 10 by 13 feet) in the bottom.

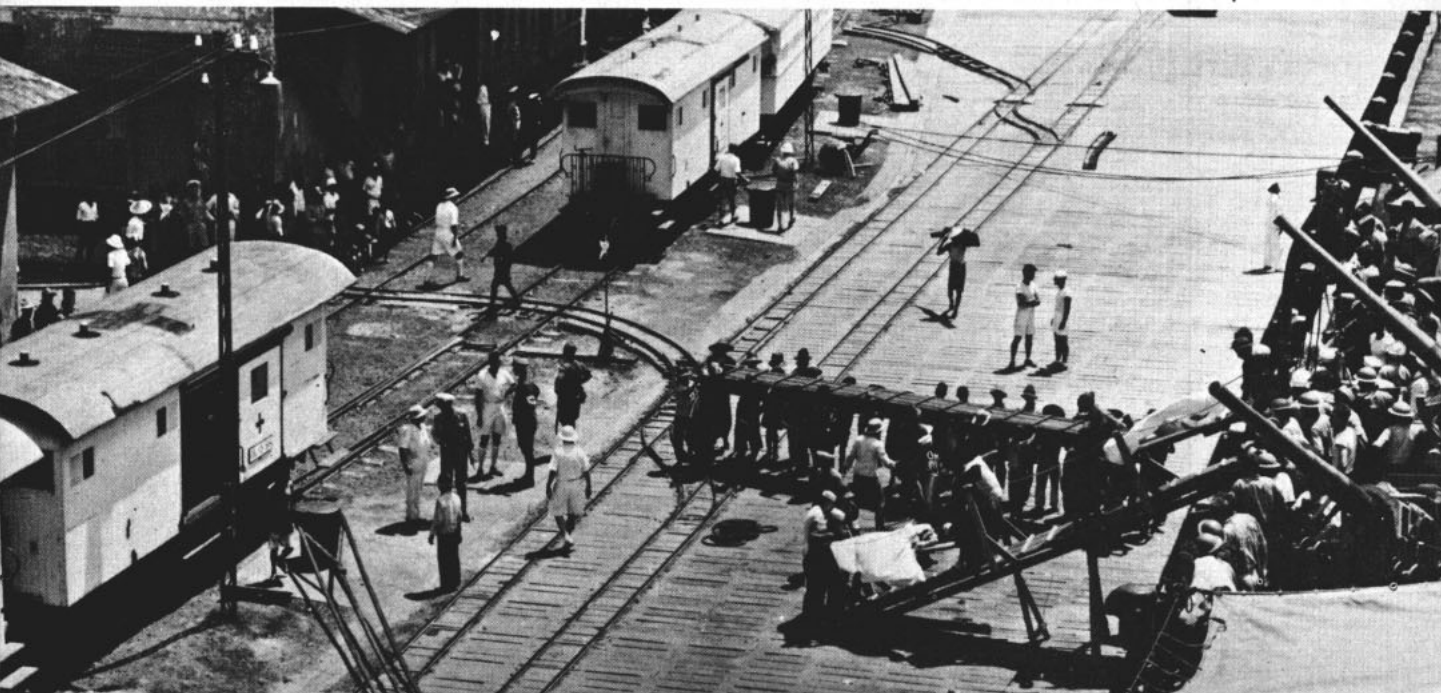
The forward end of the ship filled up rather rapidly, and in spite of everything that could be done she sank lower and lower forward.

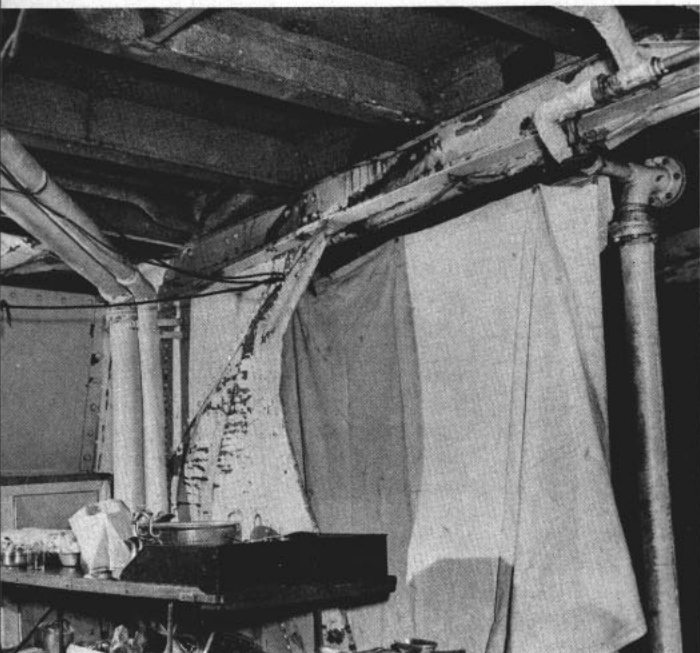
Everything that was available was put on getting the water out of the ship forward. I was told that at one time the freeboard on our forecastle was down until it was about three feet.

However, the damage control parties managed to keep the ship afloat and on 6 February we arrived off the entrance to Tjilatjap harbor. We had to stop there and take tugs to tow us in because it was not possible to steer the ship through the mine field.

As we came in through the channel to our dock, we passed *Houston* and the entire crew of *Houston* was on deck and, as we went by them, they gave us a very lusty cheer. Apparently no one led this cheer, nor did anyone lead the cheer that was given *Houston* by the crew of *Marblehead* as we passed her on the way in.

BACK IN PORT in Java wounded cruisemen are taken from *USS Marblehead* and loaded aboard hospital train.





INSIDE JOB — At Tjilatjap living space was made habitable and an improvised messing system was set up.

At this point CDR Goggins was removed from the ship for further medical attention. His adventures before he reached safety make quite a tale in themselves, but this is the story of Marblehead. The best account is in the report of then Captain Arthur G. Robinson, commanding officer of Marblehead at that time.

WHEN THE BOW was raised the ship was clear of the water from the stem to frame 30. It was impractical to raise the stern completely clear.

During the time in dock there existed the constant problem of maintaining a condition of stable equilibrium of the overloaded drydock and preventing the ship from launching itself stern first.

On several occasions the engineer in charge of the dock found it necessary to flood the dock, and then cautiously repeat the pumping, until the ship was raised sufficiently to continue repairs, and at the same time to allow a small safety factor against a dangerous condition of unstable equilibrium. This reflooded the damaged areas and prevented complete stoppage of leaks.

Before any patching could be attempted in the ship's bottom, it was necessary to clear the ammunition from the port compartments of Group II magazines.

The force of the underwater explosion had completely wrecked these spaces, and powder cans, shells, and small arms ammunition were scattered throughout the area.

Before the water and fuel oil had drained from this space, the ship's force commenced removing the ammunition. When the water and oil level within the ship dropped below the two large ruptures in the ship's bottom, additional handling parties were formed and ammunition was removed through the bottom and side of the ship direct to the drydock floor. After the ammunition was removed, it was necessary to wipe down the inner skin of the ship on which a thick coating of fuel oil remained.

By 2200, 7 February, conditions were satisfactory for

welding and cutting, and the local native workmen commenced fabricating and welding patch pieces to cover the two large jagged ruptures, and the caulking of all seams and rivets in the vicinity. These temporary emergency repairs were completed and the ship undocked on 10 Feb 1942.

DURING THIS TIME, the stern was raised as far as possible and held in this position for a short time while the ship's divers and repair force inserted plugs in rivet holes and arc-welded all evident leaks in the after end of the ship. Because of the intermittent flooding of the dock, the ship was never completely emptied of water and the forward hull could not be made fully watertight, but the patching prevented any surge of water from the outside.

While repairs were progressing on the underwater damage, the ship's repair force, on a day shift, and the local Javanese workmen, on a night shift, were engaged in clearing away the fantail deck plating and the mass of wreckage below. As there was no crane available, it was necessary to cut the wrecked deck plating and other masses of wreckage into pieces small enough to be handled by manpower. Upon undocking, all wreckage had been removed from the after damaged area.

In the meantime, the crew was engaged, day and night, in ridding the ship of wreckage, debris, oil-soaked contents of storerooms, and in cleaning and removing canned foods and other materials. The repair force was restoring a fresh water system in the forward part of the ship, rigging temporary lighting, power and sound-powered telephones throughout the ship, shoring weakened bulkheads and decks, and plugging and welding holes and seams within the damaged area.

After leaving drydock and until sailing on the 13th, emergency work continued day and night.

The local contractor supplied and installed athwartship angle bars at each frame on the open fantail and angle bar pillars to support a temporary deck. Lumber was supplied from ashore and installed by the ship's force. In addition to the angle bar deck beams, additional tie rods were installed by the ship's force, as all strength members supporting the original deck were completely destroyed. To make the temporary decking watertight, three layers of canvas were laid over the wood deck, secured by battens, and each layer painted.

BY THIS TIME all 6-inch guns, with the exception of the after twin, had been made ready for action, using emergency control.

No assistance or material was available in Tjilatjap for further repairs and it was apparent that the port would not be tenable much longer. Orders were received to proceed to Colombo, Ceylon, for docking and further repairs. The destination was later changed to Trincomalee, Ceylon, while en route to Colombo.

When ready to sail, the leakage of water into the ship and within the ship had been reduced to a rate where it was considered that submersible pumps could keep the level under control; the after deck was considered reasonably strong and watertight; most of the crew's living spaces had been made habitable; the installation of bunks, wash basins and cots in the wardroom country provided rough accommodation for the junior officers and warrant officers; a cafeteria system had been improvised for messing the crew; usable parts from various

refrigerators and water coolers were salvaged and provided a satisfactory refrigerator.

Shoes and clothing had been obtained from other ships to provide a few of these essentials to men whose lockers or bags had been ruined by fire and flooding.

It had been impossible to repair the steering motors other than salvaging parts of the two damaged panels; thus the ship left Tjilatjap on Friday, 13 April, able to steer only by means of the main engines. For the most part this was best accomplished by running the engines on one side at a steady speed and working the opposite side up and down to hold the ship on the desired course.

TWO TUGS, one forward and one aft, took the ship out of the harbor. Here the after tug cast off. When in the middle of the narrow channel through the mine field, the tow line parted. In an effort to run another line, the tug put herself in a position across the bow.

In the collision that followed, the ship's stem was folded over and split between the 15- and 25-foot waterlines. The passage through the mine field was completed without tugs, steering through the mine field with the engines. The space inside was too narrow for access and plugs and caulking were driven into the ruptures from the outside. The pitching of the ship made this work hazardous and ineffective. The forward peak tank flooded, was secured and shored during the ensuing voyage.

Special watches were set on water-tight integrity, and submersible pumps were in constant operation. It was necessary to maintain continuous pumping. The repair force was constantly on the alert for leaks within the damaged area, and many leaks were stopped. It was possible to keep the water level below the second platform deck.

While at sea, work toward ridding the ship of oil-soaked wreckage and debris continued. Vent systems and trunks were repaired where possible. Usable lockers and bunks from uninhabitable areas were reinstalled on and above the main deck. More powder cans from the magazine, now only partially flooded, were removed and inspected. Damaged powder was thrown overboard, and good powder stowed in dry spaces. The work of restoring electrical service throughout the ship continued unceasingly.

SINCE WE WERE STEAMING in waters of probable action, it was necessary to exercise great care in working below decks. With fuel oil spread throughout the hold and both platform levels, the danger of fire and gas was ever present.

Upon arrival at Trincomalee, Ceylon, on February 21, the ship was in a reasonable state of cleanliness above the first platform deck; flooding was kept well under control by the steam pumps; and considerable progress had been made towards repairing one steering motor.

At Trincomalee there were no facilities available for improving the temporary repairs already accomplished at Tjilatjap, and it was learned that no work could be undertaken in any Indian port for many weeks. It was decided to send *Marblehead* to a South African port for further repairs. Orders were issued to proceed when ready.

On leaving Trincomalee on 2 March, great progress

had been made by the ship's force toward the improvement of watertight integrity, preparations and readiness for handling any unforeseen flooding, and in steps taken to improve the living conditions of officers and men. Damage control equipment and facilities had been overhauled and redistributed, ready for further action.

USING PARTS OF BOTH disabled steering motors, the electrical force had succeeded in putting one steering motor and panel back in commission, and the ship cleared the harbor using the rudder, operated by the trick wheel in the steering gear room and controlled by sound-powered telephone from the bridge. The rudder angle and speed of movement were, however, reduced.

In addition to the regular condition of readiness watches, a special watertight integrity watch was set on the forward pump and an hourly inspection made of all damaged compartments.

The ship arrived at Durban, Union of South Africa, for fuel on 15 March after a very smooth trip with practically no changes in the watertight integrity. The leakage in the forward hold, which had previously been worked on by the ship's force, had now slowed down to about one inch in every twenty-four hours.

Marblehead arrived and entered the graving dock at Simonstown, Union of South Africa, on 24 March. Extensive repairs were carried out.

With the hold of the ship dry, the ship's force concentrated in cleaning up debris and dirt, and removing oil and water from the bilges and pockets. The forward hold was thoroughly washed out and vented.

Marblehead left Simonstown on 15 April for New York via Pernambuco, Brazil. She would fight again.

BATTLE DAMAGE similar to this happened to *Marblehead*. Cruiser shown in photo below was not identified.



TAFFRAIL TALK

NAVY JOURNALIST Jerry McConnell—a whiz as a softball pitcher and no slouch as a writer, either—has packed up his glove, his spikes and his hand-decorated desk blotter and left ALL HANDS for the sunnier clime of Guantanamo Bay, Cuba. When last seen here he was a journalist first class. However, he turned up at Gitmo as a chief.

We know he had official orders to leave when he did, but we still suspect that, in his devotion to athletics and physical fitness, he timed his departure so he wouldn't have to break his training routine to attend a wetting-down party.

While he was here, Jerry pitched two perfect softball games. He also turned in some writing performances that were practically in the same category.

Replacing McConnell on our news desk is Bill Howard, JO1, USN, whose byline first appeared in ALL HANDS while he was in England in the public information office of CINCUSNAVEUR. Bill left Red Bank, N. J., in 1956 to join the Navy. He put in three years as a steelworker in the Seabees before he made the switch to journalist.

Although Bill can't throw a rise ball like Jerry, he can bat out stories like a real pro on just about any assignment that's thrown at him.

★ ★ ★

The other day, while digging through ship and station newspapers for items that would help us get from here to the bottom of this space, we came across a western from so far out west that it happened in the Far East.

Central figure in this saga of the salt-water prairie is *uss Jupiter* (AVS 8).

One day, as the aviation supply ship was riding the range somewhere off Japan in the East China Sea, a crew member shouted those old familiar words—"Cow overboard!"

Well drilled in standard procedures for such routine shipboard emergencies, *Jupiter* men rushed to the rail of the Seventh Fleet ship to spy a black steer swimming for Kyushu. Ensign Philip Thorpe yelled "Head it off at the pass," and the chase began.

A landing craft was hastily saddled up, and a posse of sailors galloped off in hot pursuit while their shipmates cheered them on.

A lasso was neatly tossed around the animal's head, and the steer was bulldogged aboard the landing craft.

At this point a Japanese cattle boat hove into view and claimed the maverick. *Jupiter* returned the critter to its owners and went back about her business with an empty corral.

★ ★ ★

Ordinarily, the Navy's best public information officers are so busy telling the Navy's story that they rarely get into the spotlight themselves. However, we see by the papers, three Navy PIO offices have done such a good job they've won Silver Anvil Awards from the Public Relations Society of America.

The winners are the First Naval District, for its "60 Years of Destroyers" project; the Ninth Naval District, for its "West Coast Media Cruise;" and the Naval Reserve and Training Branch of the Office of Information, for its "Return of the Reserves."

The All Hands Staff

The United States Navy

Guardian of our Country

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends. The United States Navy exists to make it so.

We Serve with Honor

Tradition, valor and victory are the Navy's heritage from the past. To these may be added dedication, discipline and vigilance as the watchwords of the present and future. At home or on distant stations, we serve with pride, confident in the respect of our country, our shipmates, and our families. Our responsibilities sober us; our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

The Future of the Navy

The Navy will always employ new weapons, new techniques and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war. Mobility, surprise, dispersal and offensive power are the keystones of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

ALL HANDS The Bureau of Naval Personnel Career Publication, is published monthly by the Bureau of Naval Personnel for the information and interest of the naval service as a whole. The issuance of this publication was approved by the Secretary of the Navy on 27 June 1961. Opinions expressed are not necessarily those of the Navy Department. Reference to regulations, orders and directives is for information only and does not by publication herein constitute authority for action. All original material may be reprinted as desired if proper credit is given ALL HANDS. Original articles of general interest may be forwarded to the Editor. DISTRIBUTION: By Section B-3203 of the Bureau of Naval Personnel Manual, the Bureau directs that appropriate steps be taken to insure that all hands have quick and convenient access to this magazine, and indicates that distribution should be effected on the basis of one copy for each 10 officers and enlisted personnel to accomplish the purpose of the magazine.

The Bureau invites requests for additional copies as necessary to comply with the basic directives. This magazine is intended for all hands and commanding officers should take necessary steps to make it available accordingly.

The Bureau should be kept informed of changes in the number of copies required.

The Bureau should also be advised if the full number of copies is not received regularly.

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